

Custom

HYDRAULIC & MACHINE

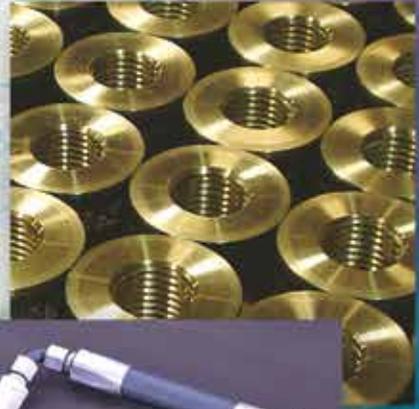


2021
CATALOG

Making the Right Connection for Over 50 Years

fittings • flanges • connectors • support sleeves
qpl • level 1/subsafe • fluid control assemblies

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qpl • level 1/subsafe • fluid control assemblies



Custom

HYDRAULIC & MACHINE

A GLOBAL/SFC VALVE COMPANY

Kent Operations Office
22911 86th Avenue South
Kent, Washington 98031
Phone: 253-854-4666
Fax: 253-854-4674
sales@customhydraulic.com
www.customhydraulic.com

 twitter.com/customhydraulic

a division of



Over a half-century of manufacturing excellence

For well over 50 years, Custom Hydraulic and Machine (CMC), a subsidiary of Global Incorporated, continues its commitment to supply the military with the highest quality products.

Today, Custom Hydraulic and Machine is the recognized industry leader in products supplied to Navy Aircraft Carriers, Submarines and all Surface Ships. We support public and private shipyards across the U.S. and internationally.

Military Specifications

Custom Hydraulic and Machine continues our dedicated focus on the design, development, and manufacture of fluid systems and components. CMC designs and manufactures hydraulic hose fittings and hose assemblies for critical military applications. CMC hose assemblies meet the following Military Specifications:

MIL-H-24135, Hose, Synthetic Rubber
MIL-DTL-24135, Hose, Synthetic Rubber
MIL-H-24136, Hose, Synthetic Rubber
MIL-DTL-24136, Hose, Synthetic Rubber
MIL-F-24787, Fittings and Hose Assemblies
MIL-DTL-24787, Fittings and Hose Assemblies

Additionally, all products can be supplied in accordance with Navy Level 1 Standards when required.

Many of our fittings are suitable for pressures up to 10,000 PSI. The specific pressure rating is determined by the applicable military specification or S.A.E. rating. Standard hose fittings are available in monel, stainless steel, brass/bronze, high nickel alloy and titanium. All of our military specification hose ends fit hoses that are qualified by the NAVSEA QPL program.

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Technology

Our company embraces the rapid pace of computerized innovation. To ensure the quality of our parts is maintained we use SolidWorks inspection documents that are created directly from the drawing.

CMC also maintains a state-of-the-art quality assurance department which is equipped with a Starrett MVR 3000 manual vision system, as well as the most recent calibrated tools.

With many decades of ERP experience, the company continues to update and improve our robust ERP software and processes including seamless integration using AI and RFID technology. The company's network infrastructure is connected via dedicated fiber optics connections, not only between buildings and local workstations, but dedicated coast to coast. This provides us with the most up-to-date and secure data transfer in the world today.

Affiliations

We are founding members of The Aircraft Carrier Industrial Base Coalition (ACIBC), active members of Submarine Industrial Base Council (SIBC), and Amphibious Warship Industrial Base Coalition (AWIBC).

We comply with the DFARS clause 252.204-7012 and National Institute of Standards (NIST) special publication 800-171 utilizing cybersecurity software and verified computer security procedures.

We are export compliant with both International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR).

Disclaimer

Various employees and consultants at Custom Hydraulic & Machine have reviewed and revised this catalog for years. We are only human. Please be assured that our Engineers, Machinists, Quality Assurance and Assembly personnel are much more detail oriented than our proofreaders may or may not be. If there are any mistakes in this catalog, please let us know.



HOSE ASSEMBLY

Cleaning, Inspection, Testing and Storage



CLEAN

Maintenance

Hose assemblies in operation should be inspected frequently for wear and damage such as kinking, leakage, abrasion, corrosion or other defects. Worn or damaged hose assemblies should be replaced immediately.

Clean

Clean assembly by blowing out with clean compressed air. Assemblies may be rinsed out with mineral spirits if the tube stock is compatible with oil, otherwise hot water at +150°F maximum may be used.

Inspect

It is important to examine the hose assembly internally for cut or bulged tube, obstructions and cleanliness. For segment style fittings, be sure that the hose butts up against the nipple shoulder; band and retaining ring are properly set and tight, and



INSPECT

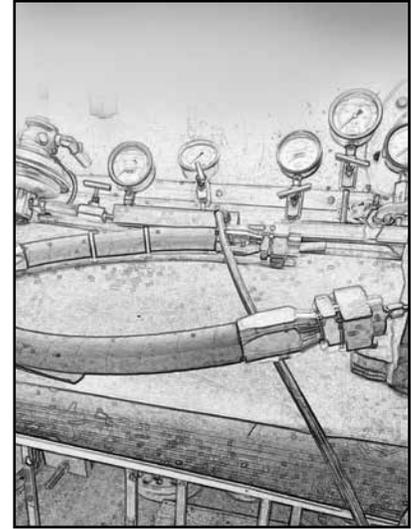
segments are properly spaced. Check for proper gap between nut and socket or hex and socket. Nuts should swivel freely. Check the layline of the hose to be sure that the assembly is not twisted. Cap the ends of the hose with plastic covers to keep clean.

Proof Test (hydrostatic)

The hose assembly should be hydrostatically tested at twice the recommended working pressure of the hose.

Test pressure should be held for no less than one minute and no more than five minutes. When test pressure is reached, visually inspect the hose assembly for:

- a. Any leaks or signs of weakness
- b. Any movement of the hose fitting in relation to the hose. Any of these defects are cause for rejection.



PROOF TEST HYDROSTATIC

Caution

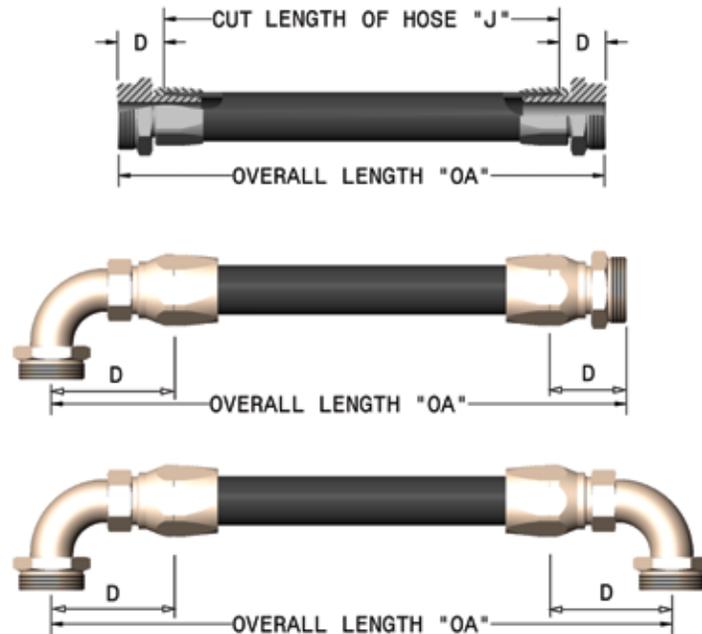
Testing should be conducted in approved test stands with adequate safety guards to protect the test engineer.

Storage and Handling

Hose should be stored in a dark, dry environment away from electrical equipment, and the temperature should not exceed +90°F. Storage in the original shipping container is preferred.

TECHNICAL DATA

Assembly Tips, Routing and Installation



TERMINOLOGY

SKIVE

Strip, as to strip-off a thin layer of cover material.

DASH SIZE

The hose or fitting size expressed in 1/16 of an inch. The numerator of a fraction whose denominator is 16.

Example:

-8 or -08 is $8/16 = 1/2$ ".

NIPPLE

The part of a hose fitting that goes into the hose tube.

SOCKET

The part of a hose fitting that goes over the hose cover or reinforcement.

MANDREL

A round, properly sized, steel bar used for support during assembly of the fitting or skiving the hose cover.

CUTTING THE HOSE

1. To determine the "J" length (cut length of hose) from "OA" (overall length) deduct "D" dimensions of both end fittings. Consult reusable fitting information pages for "D" dimensions.

TIP:

If the old assembly was the right length, simply remove the hose fittings and measure the hose.

2. Cut the hose square.

3. Clean the hose bore. Blow out shavings with shop air, flush with solvent compatible with the hose or use a low pressure air gun.

CAUTION:

Follow proper safety procedures.

HOSE ROUTING AND INSTALLATION

Under pressure, a hose may change length. Always provide some slack in the hose to allow for this shortening or elongation. However, excessive slack in hose lines may cause poor appearance.

If a hose is installed with a twist in it, operating pressures tend to force it straight. This can loosen the fitting nut. Twisting can cause reinforcement separation and the hose could burst at the point of strain.

Alpha-Numerical Index

Quality hose ends designed specifically for the marine industry. The hose ends in this catalog are suitable for pressures up to 10,000 pounds per square inch. The specific pressure rating is determined by the applicable military specification or S.A.E. rating. Standard hose end metals are monel, stainless steel, brass and naval bronze. All military specification hose ends fit hoses of all manufacturers qualified by Navsea. Qualified Products Lists (QPL) are available at QPLdocs.dla.com. S.A.E. hose ends fit most manufacturers hoses. For specific warranty and liability information contact CMC®.

NOTE: If you only have the MIL-DTL-24787/_ and figure # to order by, please contact our Sales Dept. at Sales@CustomHydraulic.com to ensure it is crossed over correctly to the CMC® part number.

ITEM	PAGE
MIL-H-24135/1 Fittings	5-11
MIL-H-24135/2 Fittings	12-16
MIL-H-24135/3 Fittings	17-19
MIL-H-24136/2 Fittings	20-23
MIL-H-24136/3 Fittings	24-38, 52
MIL-H-24136/1 & 24136/4 Fittings	39-49
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PART NUMBER BY NUMERICAL ORDER		
BASIC NO.	DESCRIPTION	PAGE
CMC-5N01	90° Elbow, 37° Flare Swivel, SAE 100R5 Hose	53
CMC-5102	MIL-F-20042, Class III Flange Connection	10
CMC-5110	Straight, Class I Flange Connection	39
CMC-5111	MIL-H-20042, Class I Flange Connection	27
CMC-5120	Straight, Class II Flange Connection	40
CMC-5121	MIL-F-20042, Class II Flange Connection	28
CMC-5130	Straight, Class III Flange Connection	41
CMC-5131	MIL-F-20042, Class III Flange Connection	29
CMC-5140	Straight, Class IV Flange Connection	42
CMC-5141	MIL-F-20042, Class IV Flange Connection	30
CMC-5150	Straight, Class V Flange Connection	43
CMC-5151	ANSI-B16.5 Class V Flange Connection	31
CMC-5202	90° MIL-F-20042, Class III Flange Connection	11
CMC-5210	90° Elbow, Class I Flange Connection	44
CMC-5211	90° MIL-F-20042, Class I Flange Connection	32
CMC-5220	90° Elbow, Class II Flange Connection	45
CMC-5221	90° MIL-F-20042, Class II Flange Connection	33
CMC-5230	90° Elbow, Class III Flange Connection	46
CMC-5231	90° MIL-F-20042, Class III Flange Connection	34
CMC-5240	90° Elbow, Class IV Flange Connection	47
CMC-5241	90° MIL-F-20042, Class IV Flange Connection	35
CMC-5250	90° Elbow, Class V Flange Connection	48
CMC-5251	90° ANSI B16.5, Class V Flange Connection	36
CMC-5300	90° Dogleg, Half-Clamp Hose Connection	49
CMC-5301	37° Male JIC Flare, SAE 100R5 Hose	50
CMC-5311	90° Dogleg, MIL-H-24136/3 Hose	38

PART NUMBER BY NUMERICAL ORDER		
BASIC NO.	DESCRIPTION	PAGE
CMC-5401	Male Pipe Thread, SAE 100R5 Hose	51
CMC-5402	Male Pipe Thread, MIL-H-24135/1 Hose	5
CMC-5403	Male Pipe Thread, MIL-H-24135/2 Hose	12
CMC-5501	37° Flare Swivel, MIL-H-24136/3 Hose	25
CMC-5502	37° Flare Female Swivel, MIL-H-24135/1 Hose	6
CMC-5503	37° Flare Female Swivel, MIL-H-24135/2 Hose	13
CMC-5504	37° Flare Swivel, MIL-H-24135/3 Hose	17
CMC-5505	37° Flare Female Swivel, Push On Hose	54
CMC-5511	37° Flare Swivel, SAE 100R5 Hose, MIL-H-24136/3 Hose	52
CMC-5601	Male O-Ring MIL-H-24136/3 Hose	24
CMC-5602	Male O-Ring MIL-H-24135/1 Hose	7
CMC-5603	Male O-Ring MIL-H-24135/2 Hose	14
CMC-5604	Male O-Ring MIL-H-24135/3 Hose	18
CMC-5701	90° Male O-Ring MIL-H-24136/3 Hose	26
CMC-5702	90° Male O-Ring MIL-H-24135/1 Hose	8
CMC-5703	90° Male O-Ring MIL-H-24135/2 Hose	15
CMC-5801	90° Dogleg-MIL-H-24136/3 Hose	37
CMC-5802	90° Male Dogleg, MIL-H-24135/1 Hose	9
CMC-5803	90° Male Dogleg, MIL-H-24135/2 Hose	16
CMC-5804	90° Male Dogleg, MIL-H-24135/3 Hose	19
CMC-5901	37° Flare Female Swivel, MIL-H-24136/2 Hose	20
CMC-5902	Male O-Ring, MIL-H-2416/2 Hose	21
CMC-5903	90° Male O-Ring, MIL-H-24136/2 Hose	22
CMC-5904	90° Dogleg, MIL-H24136/2 Hose	23
CMC-A-J	Swivel Connectors	56-63
CMC-SC-1-000	Inner Support Sleeves	55

HOW MAY WE HELP YOU?
 For assistance call 253-854-4666
www.customhydraulic.com



CMC® Hose End Fittings

Applications

The hose ends described in the following section are manufactured to strict standards. They are designed to stand up to the rugged service they may encounter in the oceans of the world. The materials of construction were selected to provide long dependable service.

Reuse-ability

The styles of the fittings in this section allow for in-the-field hose assembly, following the instructions on page 64. In the event of hose failure, these hose ends often may be reassembled onto new hose. However, care must be taken to inspect the hose ends to assure that no damage has occurred to the fittings before reassembly.

Compatible Hoses

CMC hose ends are designed to be used with the hoses manufactured to military specifications. The applicable specification is shown at the top of each catalog sheet. Additionally, CMC hose ends are compatible with many SAE specification hoses. Such hoses are available from various manufacturers. Consideration should be given to procuring hose from only reputable manufacturers that adhere to applicable standards, which can be provided when required.

Government Requirements

Numerous hose ends depicted within this catalog are designed to meet various U.S. Naval requirements. Most of the fittings are produced in accordance with Navy Level I standards. Documentation and hardware marking to meet these standards can be provided when required.

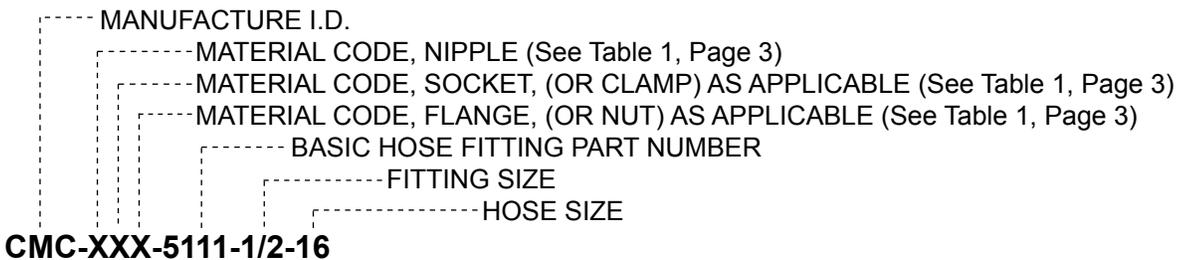
New Design

CMC is constantly reviewing existing products and manufacturing methods. New products are currently under development which are not shown in this catalog. CMC is also interested in working with customers in the development of related products which would meet their new requirements.

End Selection

The hose ends shown on the following pages should be ordered by the part number corresponding to the configuration and size needed.

If special inspection, packaging, certification, etc. is required, it should be clearly spelled out at the time of product request.



NOTE:

Not all assemblies contain three material code variables as shown above, some assemblies will only contain one (if all components are made from the same material) or two.

CMC® Hose End Fittings

Component Piece Ordering

See individual pages for component part numbers.

Alternate Materials For Standard Configuration Hose Ends

The hose ends shown on the following pages represent the standard CMC product. Additionally, many hose ends are manufactured of materials different from those shown.

Hose Size Chart

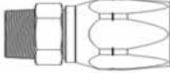
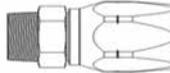
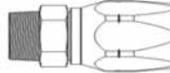
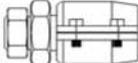
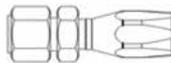
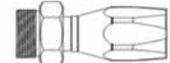
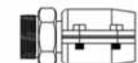
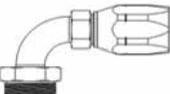
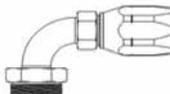
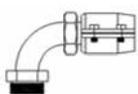
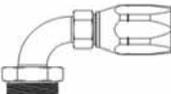
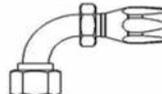
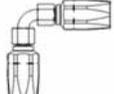
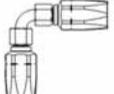
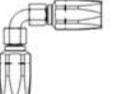
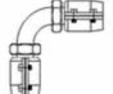
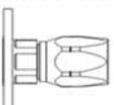
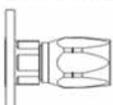
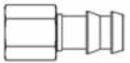
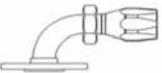
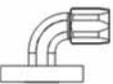
I.P.S. (size inches)	=	CMC Size
1/4	=	-4
3/8	=	-6
1/2	=	-8
3/4	=	-12
1	=	-16
1-1/4	=	-20
1-1/2	=	-24
2	=	-32
2-1/2	=	-40
3	=	-48
4	=	-64
5	=	-80
6	=	-96

TABLE 1, MATERIAL SPECIFICATIONS

	Description	Code
STEEL	FOR EXACT SPEC. CONTACT CMC	1
STAINLESS STEEL	QQ-S-763 CL-316/316L	2
STAINLESS STEEL	QQ-S-763 CL-304/304L	3
MONEL	QQ-N-281	4
MONEL 400	QQ-N-281 CLASS A	400
K-MONEL	QQ-N-286	5
MONEL (CAST)	ASTM-A494 (Superseded QQ-N-288)	6
TIN BRONZE	QQ-C-390, ALLOY #903	7
NI-AL-BRONZE	MIL-B-24480	8
BRASS	SAE-41	9
COPPER NICKEL 70/30	MIL-C-15726	10
COPPER NICKEL 70/30 TUBE	MIL-T-16420, TYPE I, GRADE II	CN
MONEL TUBE	MIL-T-1368, CL A	M
TITANIUM	FOR EXACT SPEC, CONTACT CMC	TI
INCONEL 625	ASTM B446	INC

CMC® Hose End Fittings

Visual Selection Chart

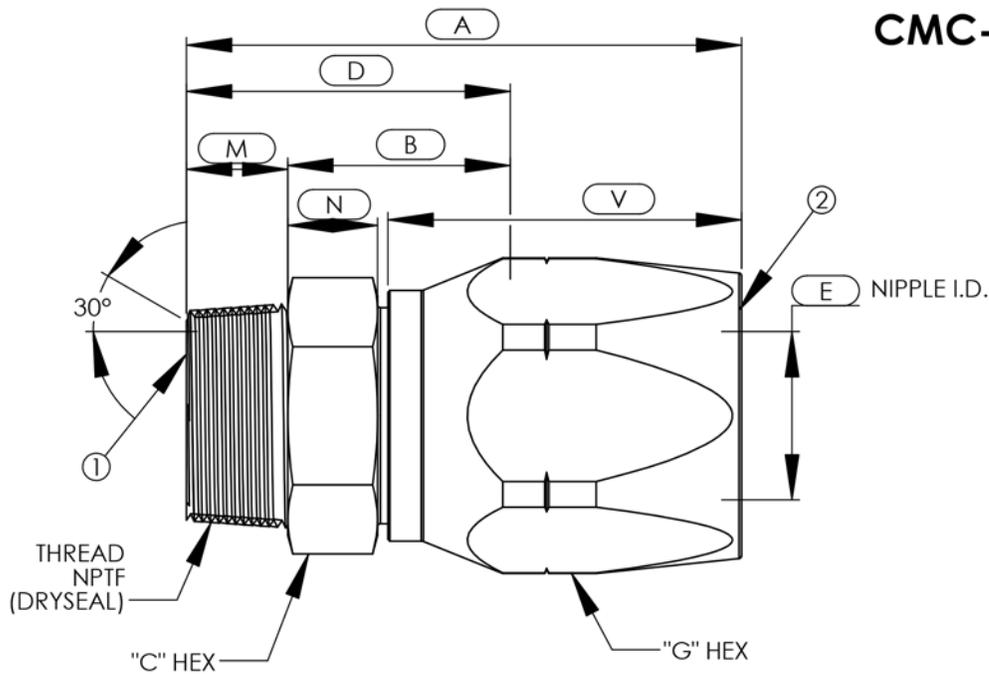
FOR MIL-H-24135/1 HOSE	FOR MIL-H-24135/2 HOSE	FOR MIL-H-24135/3 HOSE	FOR MIL-H-24136/2 HOSE	FOR MIL-H-24136/3 HOSE	FOR SAE 100R5 HOSE	
<p>CMC-4-5402 MALE NPT THD</p>  <p>PAGE 5</p>	<p>CMC-4-5403 MALE NPT THD</p>  <p>PAGE 12</p>			<p>CMC-4-5511 37° FEM. SWIVEL NO HEX</p>  <p>PAGE 52</p>	<p>CMC-4-5401 MALE NPT THD</p>  <p>PAGE 51</p>	
<p>CMC-4-5502 37° FEM. SWIVEL</p>  <p>PAGE 6</p>	<p>CMC-4-5503 37° FEM. SWIVEL</p>  <p>PAGE 13</p>	<p>CMC-4-5504 37° FEM. SWIVEL</p>  <p>PAGE 17</p>	<p>CMC-4-5901 37° FEM. SWIVEL</p>  <p>PAGE 20</p>	<p>CMC-4-5501 37° FEM. SWIVEL</p>  <p>PAGE 25</p>	<p>CMC-4-5511 37° FEM. SWIVEL NO HEX</p>  <p>PAGE 52</p>	
<p>CMC-4-5602 MALE O-RING</p>  <p>PAGE 7</p>	<p>CMC-4-5603 MALE O-RING</p>  <p>PAGE 14</p>	<p>CMC-4-5604 MALE O-RING</p>  <p>PAGE 18</p>	<p>CMC-4-5902 MALE O-RING</p>  <p>PAGE 21</p>	<p>CMC-4-5601 MALE O-RING</p>  <p>PAGE 24</p>	<p>CMC-4-5301 37° MALE J.I.C. FLARE</p>  <p>PAGE 50</p>	
<p>CMC-4-5702 MALE O-RING 90°</p>  <p>PAGE 8</p>	<p>CMC-4-5703 MALE O-RING 90°</p>  <p>PAGE 15</p>		<p>CMC-4-5903 MALE O-RING 90°</p>  <p>PAGE 22</p>	<p>CMC-4-5701 MALE O-RING 90°</p>  <p>PAGE 26</p>	<p>CMC-4-5N01 37 D. FEMALE SWIVEL 90° ELBOW</p>  <p>PAGE 53</p>	
<p>CMC-4-5802 90° DOGLEG</p>  <p>PAGE 9</p>	<p>CMC-4-5803 90° DOGLEG</p>  <p>PAGE 16</p>	<p>CMC-4-5804 90° DOGLEG</p>  <p>PAGE 19</p>	<p>CMC-4-5904 90° DOGLEG</p>  <p>PAGE 23</p>	<p>CMC-4-5801 90° DOGLEG</p>  <p>PAGE 37</p>		
<p>CMC-4-5102 FLNG. CONN.</p>  <p>PAGE 10</p>				<p>CMC-4-5111 FLNG. CONN.</p>  <p>PAGE 27</p>	<p>CMC-4-5505 37° FEM. SWIVEL</p>  <p>PAGE 54</p>	
<p>CMC-4-5202 90° FLNG. CONN.</p>  <p>PAGE 11</p>				<p>CMC-4-5211 90° FLNG. ELBOW</p>  <p>PAGE 32</p>	<p>SUPPORT SLEEVES</p>	
				<p>CMC-48-5311 90° DOGLEG</p>  <p>PAGE 38</p>	<p>CMC-SC-1-000</p>  <p>PAGE 55</p>	

CMC® Hose End Fittings

Male Pipe Thread

For MIL-H-24135/1 Hose

CMC-5402



ASSY PART NUMBER	HOSE SIZE	NPT THREAD	A	B	C	D	E	G	M	N	V
CMC-XX-5402-1/4-04	1/4	1/4-18	2.50	0.71	0.56	1.27	0.17	0.81	0.56	0.19	1.73
CMC-XX-5402-3/8-06	3/8	3/8-18	2.75	0.72	0.69	1.28	0.31	1.00	0.56	0.25	1.92
CMC-XX-5402-1/2-08	1/2	1/2-14	3.09	0.83	0.88	1.58	0.39	1.12	0.75	0.27	2.01
CMC-XX-5402-1/2-10	5/8	1/2-14	3.18	0.87	0.94	1.62	0.48	1.25	0.75	0.31	2.10
CMC-XX-5402-3/4-12	3/4	3/4-14	3.61	0.99	1.06	1.74	0.61	1.50	0.75	0.38	2.47
CMC-XX-5402-1-16	1	1-11-1/2	4.40	1.41	1.38	2.35	0.82	1.75	0.94	0.50	2.95
CMC-XX-5402-1-1/4-20	1-1/4	1-1/4-11-1/2	4.90	1.61	1.75	2.58	1.05	2.25	0.97	0.50	3.42
CMC-XX-5402-1-1/2-24	1-1/2	1-1/2-11-1/2	4.98	1.74	2.00	2.74	1.28	2.50	1.00	0.62	3.34
CMC-XX-5402-2-32	2	2-11-1/2	5.50	2.03	2.50	3.06	1.75	3.00	1.03	0.75	3.70

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5402-(NPT SIZE)-(HOSE SIZE)-(MATERIAL CODE)

② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)

-EXAMPLE-

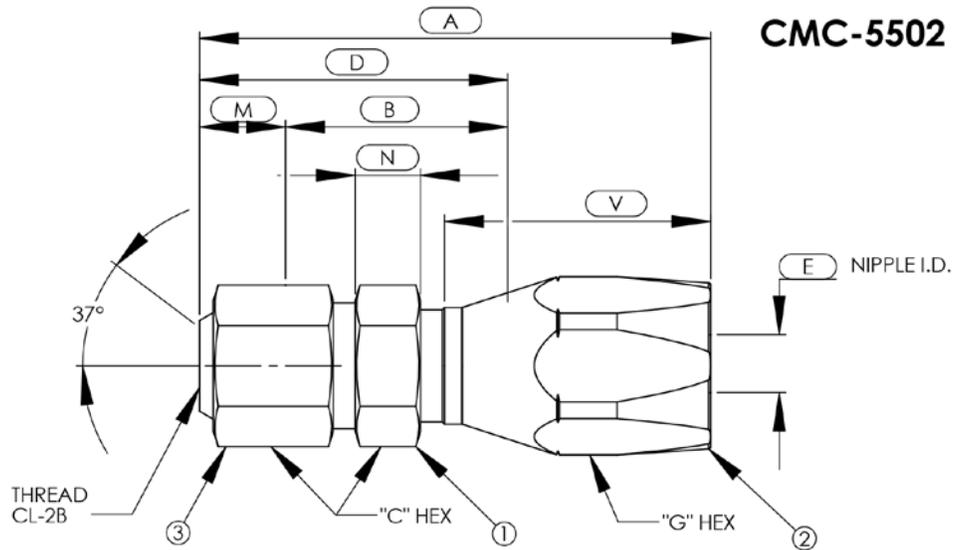
CMC-XX-5402-1/4-04

└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare
Female Swivel
QPL-24787-12

For MIL-H-24135/1 Type A
MIL-F-24787/2 Group I, Type A



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	N	V
CMC-XXX-5502-04-04	1/4	7/16-20	2.64	1.04	0.56	1.41	0.17	0.81	0.37	0.22	1.73
CMC-XXX-5502-05-04	1/4	1/2-20	2.72	1.09	0.62	1.49	0.17	0.81	0.40	0.25	1.73
CMC-XXX-5502-06-04	1/4	9/16-18	2.79	1.16	0.69	1.56	0.17	0.81	0.40	0.28	1.73
CMC-XXX-5502-06-06	3/8	9/16-18	2.98	1.11	0.69	1.51	0.31	1.00	0.40	0.28	1.92
CMC-XXX-5502-08-06	3/8	3/4-16	3.11	1.20	0.88	1.64	0.31	1.00	0.44	0.31	1.92
CMC-XXX-5502-08-08	1/2	3/4-16	3.20	1.24	0.88	1.68	0.39	1.12	0.44	0.31	2.01
CMC-XXX-5502-10-08	1/2	7/8-14	3.31	1.28	1.00	1.80	0.39	1.12	0.52	0.31	2.01
CMC-XXX-5502-10-10	5/8	7/8-14	3.40	1.33	1.00	1.85	0.50	1.25	0.52	0.31	2.10
CMC-XXX-5502-12-12	3/4	1-1/16-12	3.86	1.42	1.25	1.99	0.61	1.50	0.57	0.38	2.47
CMC-XXX-5502-16-16	1	1-5/16-12	4.48	1.83	1.50	2.43	0.82	1.75	0.60	0.38	2.95
CMC-XXX-5502-20-20	1-1/4	1-5/8-12	5.10	2.14	2.00	2.78	1.05	2.25	0.64	0.38	3.42
CMC-XXX-5502-24-24	1-1/2	1-7/8-12	5.16	2.18	2.25	2.92	1.28	2.50	0.74	0.38	3.34
CMC-XXX-5502-32-32	2	2-1/2-12	5.90	2.53	2.88	3.46	1.75	3.00	0.93	0.50	3.70

B.O.M. COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5502-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....SWIVEL NUT

-EXAMPLE-

CMC-XXX-5502-04-04

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

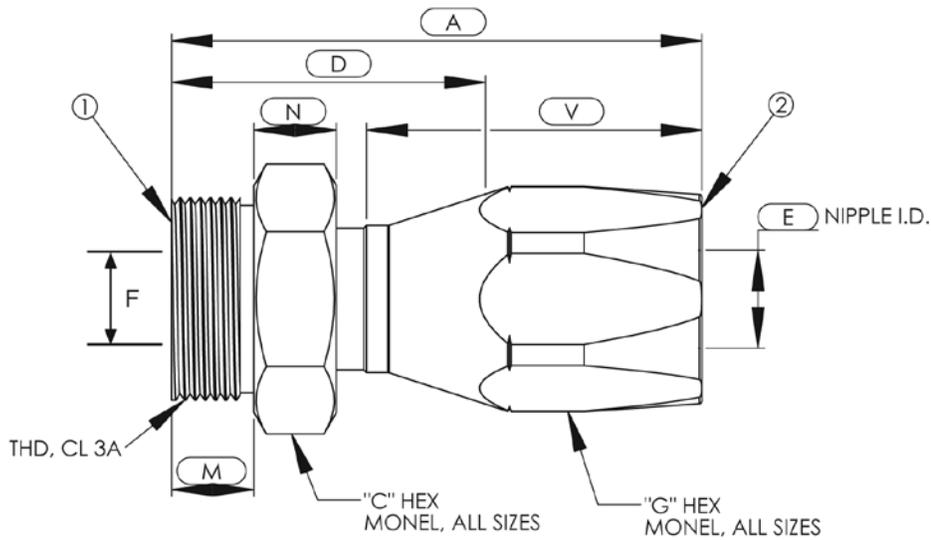
CMC® Hose End Fittings

Male O-Ring Seal

For MIL-H-24135/1 Type C
MIL-F-24787/3 Group I, Type C

QPL-24787-12

CMC-5602



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	F	G	M	N	V
CMC-XX-5602-1/8-04	1/8	1-14	2.50	1.06	1.26	0.17	0.17	0.81	0.50	0.25	1.73
CMC-XX-5602-1/4-06	1/4	1-3/16-12	2.82	1.25	1.34	0.31	0.31	1.00	0.62	0.25	1.92
CMC-XX-5602-3/8-08	3/8	1-3/8-12	2.96	1.44	1.45	0.39	0.39	1.12	0.62	0.31	2.01
CMC-XX-5602-1/2-12	1/2	1-3/4-12	3.49	1.81	1.62	0.50	0.50	1.50	0.62	0.38	2.47
CMC-XX-5602-3/4-12	3/4	2-12	3.61	2.12	1.74	0.61	0.61	1.50	0.62	0.50	2.47
CMC-XX-5602-3/4-16	3/4	2-12	4.09	2.12	2.04	0.62	0.62	1.81	0.62	0.50	2.95
CMC-XX-5602-1-16	1	2-5/16-12	4.34	2.38	2.28	0.81	0.81	1.81	0.75	0.62	2.95
CMC-XX-5602-1-20	1	2-5/16-12	4.80	2.38	2.48	0.81	0.81	2.25	0.75	0.62	3.42
CMC-XX-5602-1-1/4-24	1-1/4	2-3/4-12	4.72	2.88	2.48	1.21	1.21	2.50	0.75	0.62	3.34
CMC-XX-5602-1-1/2-24	1-1/2	2-3/4-12	5.03	3.12	2.63	1.28	1.28	2.50	0.77	0.59	3.34
CMC-XX-5602-1-1/2-32	1-1/2	3-1/16-12	5.34	3.12	2.90	1.39	1.39	3.00	0.88	0.75	3.70
CMC-XX-5602-2-32	2	3-3/4-12	5.34	3.88	2.90	1.75	1.75	3.00	0.88	0.75	3.70

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5602-(NPT SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)

-EXAMPLE-

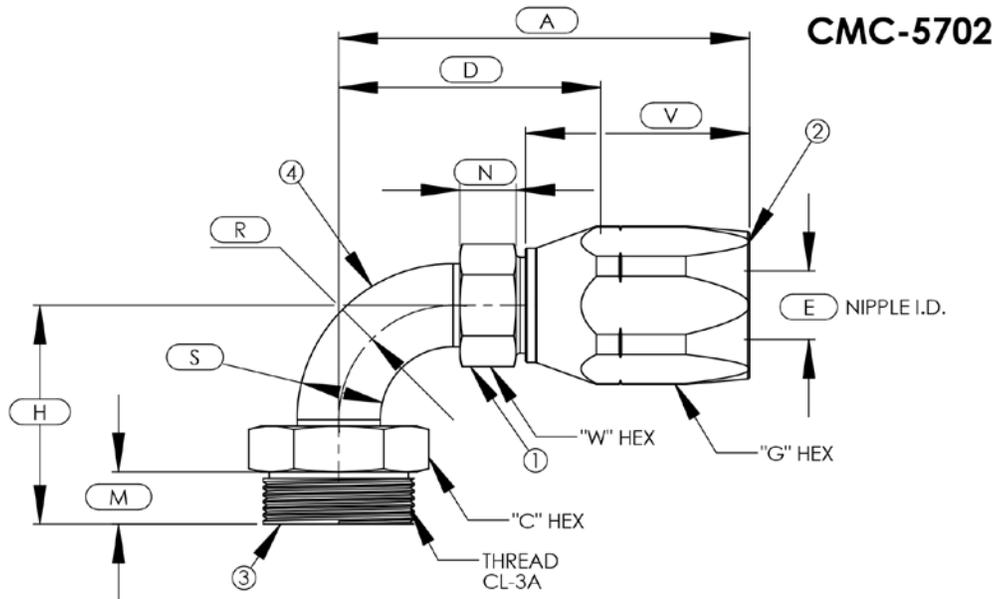
CMC-XX-5602-1/8-04

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

Male O-Ring
Seal 90°
QPL-24787-12

For MIL-H-24135/1 Type CL
MIL-F-24787/3 Group I, Type CL



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	G	H	M	N	R	S	V	W
CMC-XXX-5702-1/4-06	1/4	1-3/16-12	3.11	1.25	1.63	0.31	1.00	1.43	0.62	0.62	0.50	0.38	1.92	0.69
CMC-XXX-5702-3/8-08	3/8	1-3/8-12	3.44	1.44	1.93	0.39	1.12	1.74	0.62	0.62	0.75	0.50	2.01	0.81
CMC-XXX-5702-1/2-12	1/2	1-3/4-12	4.52	1.81	2.65	0.61	1.50	2.31	0.62	0.74	1.25	0.75	2.47	1.06
CMC-XXX-5702-3/4-12	3/4	2-1/2	4.52	2.12	2.65	0.61	1.50	2.43	0.62	0.74	1.25	0.75	2.47	1.06
CMC-XXX-5702-3/4-16	3/4	2-12	5.25	2.12	3.20	0.82	1.81	2.68	0.62	0.74	1.50	1.00	2.95	1.38
CMC-XXX-5702-1-20	1	2-5/16-12	6.10	2.38	3.78	1.05	2.25	3.17	0.75	0.86	1.75	1.25	3.42	1.62
CMC-XXX-5702-1-1/4-24	1-1/4	2-3/4-12	6.32	2.88	4.09	1.28	2.50	3.42	0.75	0.92	2.00	1.50	3.34	1.88
CMC-XXX-5702-1-1/2-32	1-1/2	3-1/16-12	7.38	3.12	4.94	1.75	3.00	4.05	0.88	1.12	2.50	2.00	3.70	2.50
CMC-XXX-5702-2-32	2	3-3/4-12	7.38	3.88	4.94	1.75	3.00	4.05	0.88	1.12	2.50	2.00	3.70	2.50

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5002-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....CPV-(SIZE)-(MATL CODE)
- ④ MONEL- SIZES 6 THRU 12.....TUBE
- ④ COPPER NICKEL- SIZES 16 THRU 32 TUBE

-EXAMPLE-

CMC-XXX-5702-1/4-06

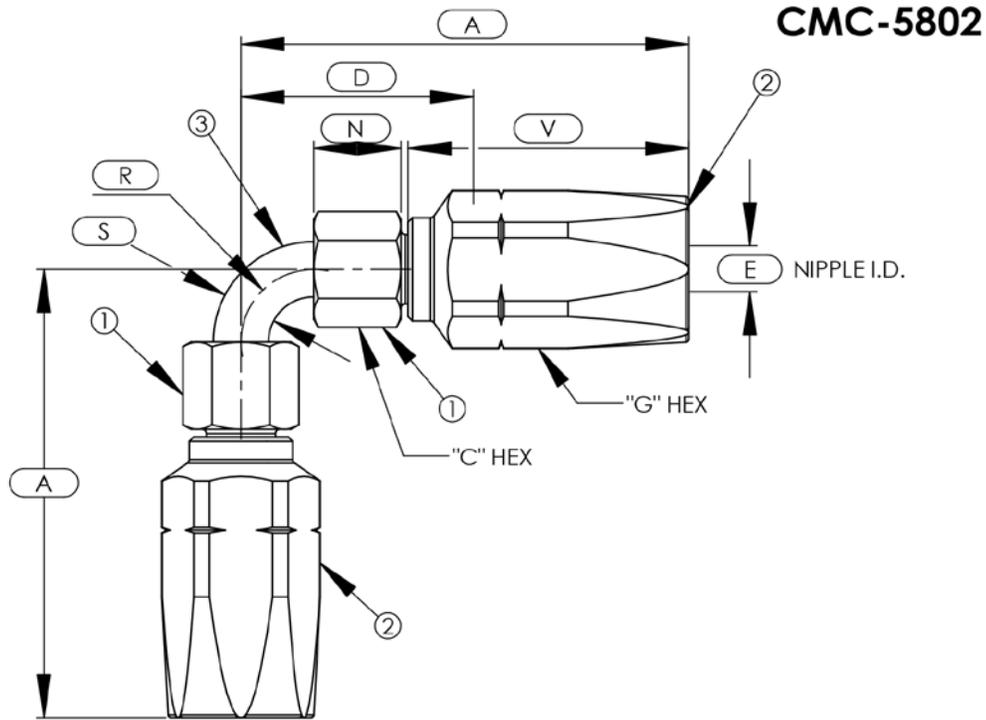
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Dogleg

For MIL-H-24135/1 Type D
MIL-F-24787/5 Group I, Type D

QPL-24787-12



ASSY PART NUMBER	HOSE SIZE	A	C	D	E	G	N	R	S	V
CMC-XX-5802-06-06	3/8	3.11	0.69	1.63	0.31	1.00	0.62	0.50	0.38	1.92
CMC-XX-5802-08-08	1/2	3.44	0.81	1.93	0.39	1.12	0.62	0.75	0.50	2.01
CMC-XX-5802-12-12	3/4	4.52	1.06	2.65	0.61	1.50	0.74	1.25	0.75	2.47
CMC-XX-5802-16-16	1	5.25	1.38	3.20	0.82	1.75	0.74	1.50	1.00	2.95
CMC-XX-5802-20-20	1-1/4	6.09	1.62	3.78	1.05	2.25	0.86	1.75	1.25	3.42
CMC-XX-5802-24-24	1-1/2	6.32	1.88	4.09	1.28	2.50	0.92	2.00	1.50	3.34
CMC-XX-5802-32-32	2	7.38	2.50	4.94	1.75	3.00	1.12	2.50	2.00	3.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5002-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)
- ③ MONEL- SIZES 6 THRU 12
- ③ COPPER NICKEL- SIZES 16 THRU 32

-EXAMPLE-

CMC-XX-5802-06-06

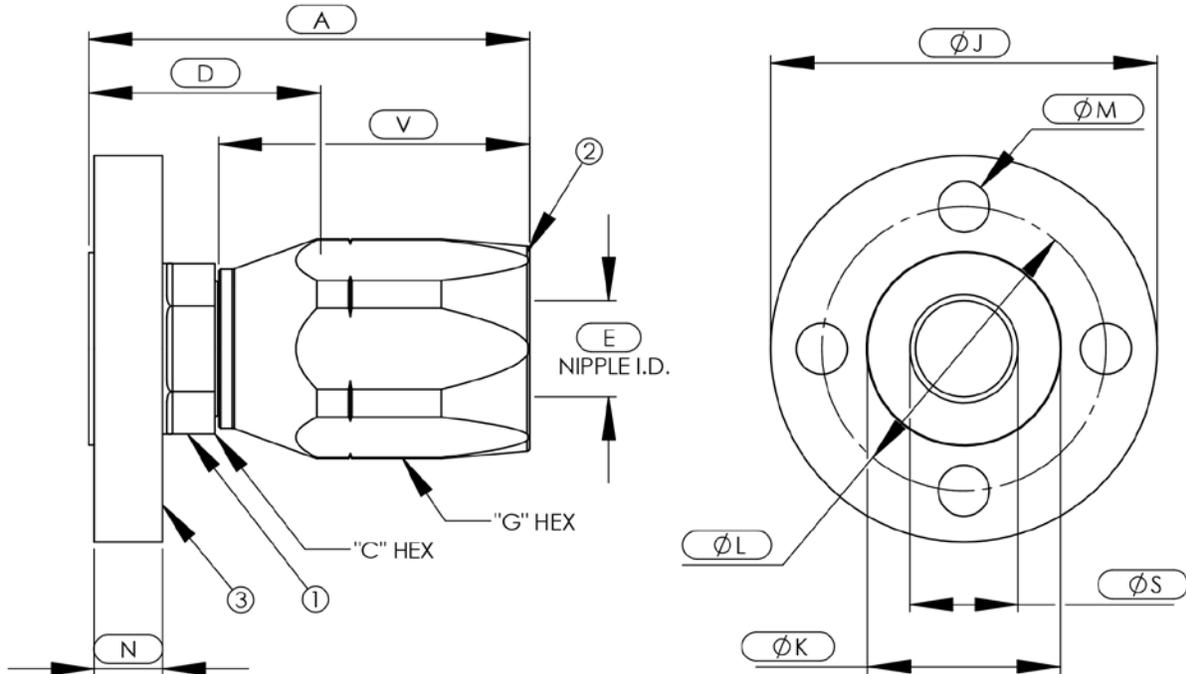
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

For MIL-H-24135/1 Type E
 MIL-F-24787/1 Group I, Type F
 MIL-F-20042 250# Class III Flange Connection

QPL-24787-12

CMC-5102



ASSY PART NUMBER	IPS SIZE	NO. BOLT HOLES	A	C	D	E	G	J	K	L	M	N	S	V
CMC-XXX-5102-1/2-12	1/2	3	3.92	1.12	2.05	0.61	1.50	3.56	1.50	2.44	0.56	0.69	0.71	2.47
CMC-XXX-5102-3/4-16	3/4	4	4.34	1.38	2.29	0.82	1.75	3.81	1.84	2.69	0.56	0.69	0.92	2.95
CMC-XXX-5102-1-20	1	4	4.81	1.62	2.49	1.05	2.25	4.25	2.12	3.12	0.56	0.75	1.18	3.42
CMC-XXX-5102-1-1/4-24	1-1/4	4	4.97	2.12	2.73	1.28	2.50	4.50	2.74	3.38	0.56	0.81	1.53	3.34
CMC-XXX-5102-1-1/2-32	1-1/2	6	5.33	2.25	2.87	1.75	3.00	5.06	2.74	3.94	0.56	0.81	1.77	3.70
CMC-XXX-5102-2-32	2	6	5.33	2.69	2.89	1.75	3.00	5.56	3.28	4.44	0.56	0.81	2.24	3.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5102-(IPS SIZE)-(HOSE SIZE)-(MATERIAL CODE)
- ② ALL SIZES-.....SO-5002-(SIZE)-(MATERIAL CODE)
- ③ ALL SIZES-.....FL-(IPS SIZE)-(HOSE SIZE)-(TYPE)-(MATERIAL CODE)

-EXAMPLE-

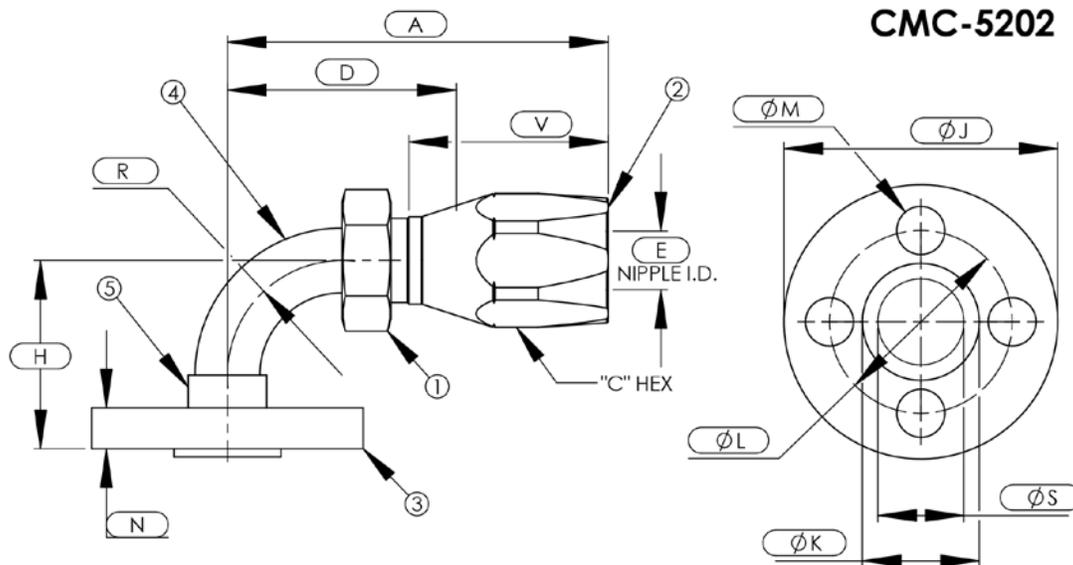
CMC-XXX-5102-1/2-12

└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

For MIL-H-24135/1 Type EL
 MIL-F-24787/1 Group I, Type FL
 MIL-F-20042 250# Type III Flange Connection

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	NO. BOLT HOLES	A	C	D	E	F	H	J	K	L	M	N	R	S	V
CMC-XXX-5202-1/2-12	1/2	3	4.52	1.50	2.65	0.61	0.75	2.19	3.56	1.50	2.44	0.56	0.69	1.25	0.71	2.47
CMC-XXX-5202-3/4-16	3/4	4	5.25	1.75	3.20	0.82	1.00	2.49	3.81	1.84	2.69	0.56	0.69	1.50	0.92	2.95
CMC-XXX-5202-1-20	1	4	6.10	2.25	3.78	1.05	1.25	2.69	4.25	2.12	3.12	0.56	0.75	1.75	1.18	3.42
CMC-XXX-5202-1-1/4-24	1-1/4	4	6.32	2.50	4.09	1.28	1.50	3.13	4.50	2.74	3.38	0.56	0.81	2.00	1.53	3.34
CMC-XXX-5202-1-1/2-32	1-1/2	6	7.38	3.00	4.94	1.75	2.00	3.35	5.06	2.74	3.94	0.56	0.81	2.50	1.77	3.70
CMC-XXX-5202-2-32	2	6	7.38	3.00	4.94	1.75	2.00	3.35	5.56	3.28	4.44	0.56	0.81	2.50	1.77	3.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5002-(IPS SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5002-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(IPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ④ MONEL- SIZES 12 ONLY.....TUBE
- ④ COPPER NICKEL-SIZES 16 THRU 32...TUBE
- ⑤ ALL SIZES-.....FL FITTING

-EXAMPLE-

CMC-XXX-5202-1/2-12

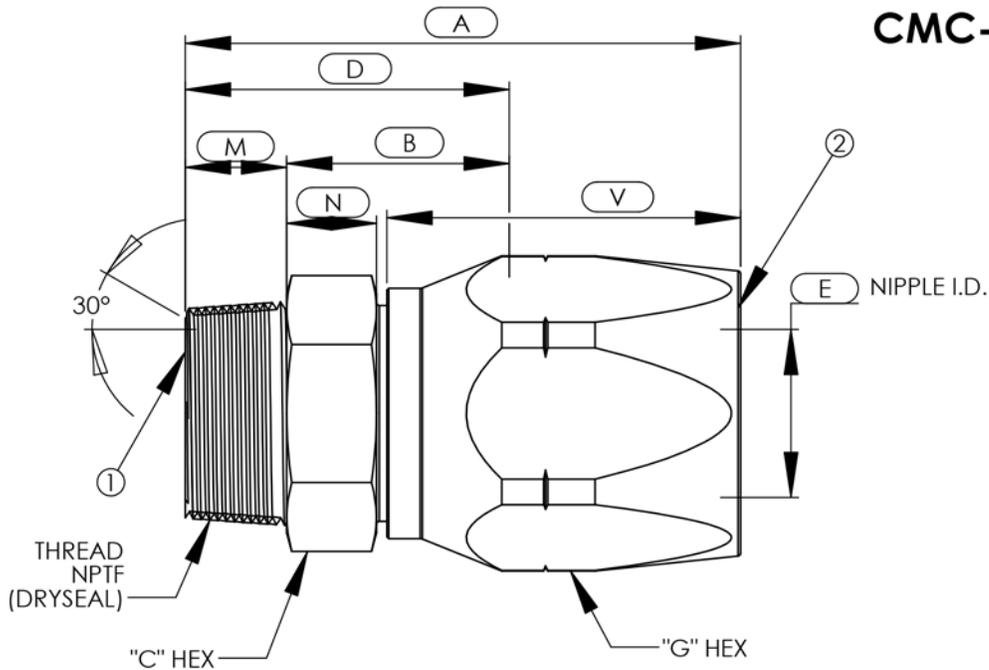
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

Male Pipe Thread

For MIL-H-24135/2 Hose

CMC-5403



ASSY PART NUMBER	HOSE SIZE	NPT THREAD	A	B	C	D	E	G	M	N	V
CMC-XX-5403-3/8-06	3/8	3/8-18	2.75	0.71	0.69	1.27	0.31	1.00	0.56	0.25	1.92
CMC-XX-5403-1/2-08	1/2	1/2-14	3.09	0.83	0.88	1.58	0.39	1.12	0.75	0.31	2.01
CMC-XX-5403-3/4-12	3/4	3/4-14	3.61	0.99	1.06	1.74	0.61	1.50	0.75	0.38	2.47
CMC-XX-5403-1-16	1	1-11-1/2	4.40	1.41	1.38	2.35	0.82	1.75	0.94	0.50	2.95

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5403-(NPT SIZE)-(HOSE SIZE)-(MATERIAL CODE)

② ALL SIZES-.....SO-5003-(SIZE)-(MATL CODE)

-EXAMPLE-

CMC-XX-5403-3/8-06

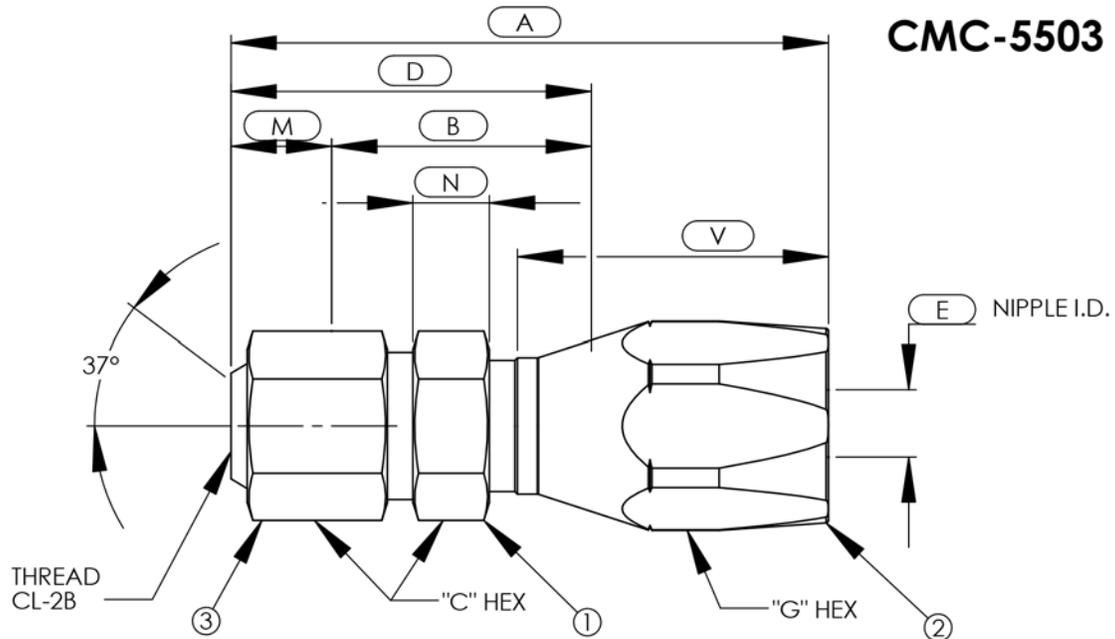
└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare Female Swivel

For MIL-H-24135/2 Type A
MIL-F-24787/2 Group II, Type A

OPC-24787-12



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	N	V
CMC-XXX-5503-06-06	3/8	9/16-18	2.98	1.10	0.69	1.51	0.31	1.00	0.40	0.28	1.92
CMC-XXX-5503-08-08	1/2	3/4-16	3.20	1.24	0.88	1.68	0.39	1.12	0.44	0.31	2.01
CMC-XXX-5503-10-08	1/2	7/8-14	3.31	1.28	1.00	1.80	0.39	1.12	0.52	0.31	2.01
CMC-XXX-5503-12-12	3/4	1-1/16-12	3.86	1.42	1.25	1.99	0.61	1.50	0.57	0.38	2.47
CMC-XXX-5503-16-16	1	1-5/16-12	4.48	1.83	1.50	2.43	0.82	1.75	0.60	0.38	2.95

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5503-(TUBE SIZE)-(HOSE SIZE)-(MATERIAL CODE)
- ② ALL SIZES-.....SO-5003-(SIZE)-(MATERIAL CODE)
- ③ ALL SIZES-.....SWIVEL NUT

-EXAMPLE-

CMC-XXX-5503-06-06

└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

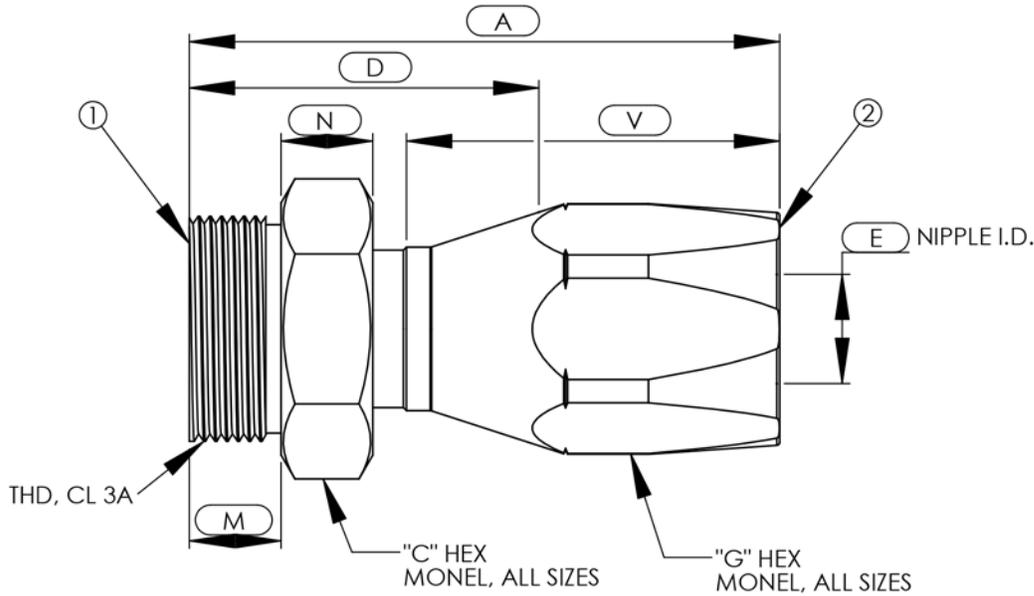
CMC® Hose End Fittings

Male O-Ring Seal

MIL-H-24135/2 Type C
MIL-F-24787/3 Group II, Type C

QPL-24787-12

CMC-5603



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	G	M	N	V
CMC-XX-5603-1/4-06	1/4	1-3/16-12	2.82	1.25	1.34	0.31	1.00	0.62	0.25	1.95
CMC-XX-5603-3/8-08	3/8	1-3/8-12	2.96	1.44	1.45	0.39	1.12	0.62	0.31	2.01
CMC-XX-5603-1/2-12	1/2	1-3/4-12	3.49	1.81	1.62	0.50	1.50	0.62	0.38	2.47
CMC-XX-5603-3/4-12	3/4	2-12	3.61	2.12	1.74	0.62	1.50	0.62	0.50	2.47
CMC-XX-5603-3/4-16	3/4	2-12	4.09	2.12	2.04	0.62	1.75	0.62	0.50	2.95
CMC-XX-5603-1-16	1	2-5/16-12	4.34	2.38	2.28	0.82	1.75	0.75	0.62	2.95

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5603-(NPS SIZE)-(HOSE SIZE)-(MATERIAL CODE)

② ALL SIZES-.....SO-5003-(SIZE)-(MATERIAL CODE)

-EXAMPLE-

CMC-XX-5603-1/4-06

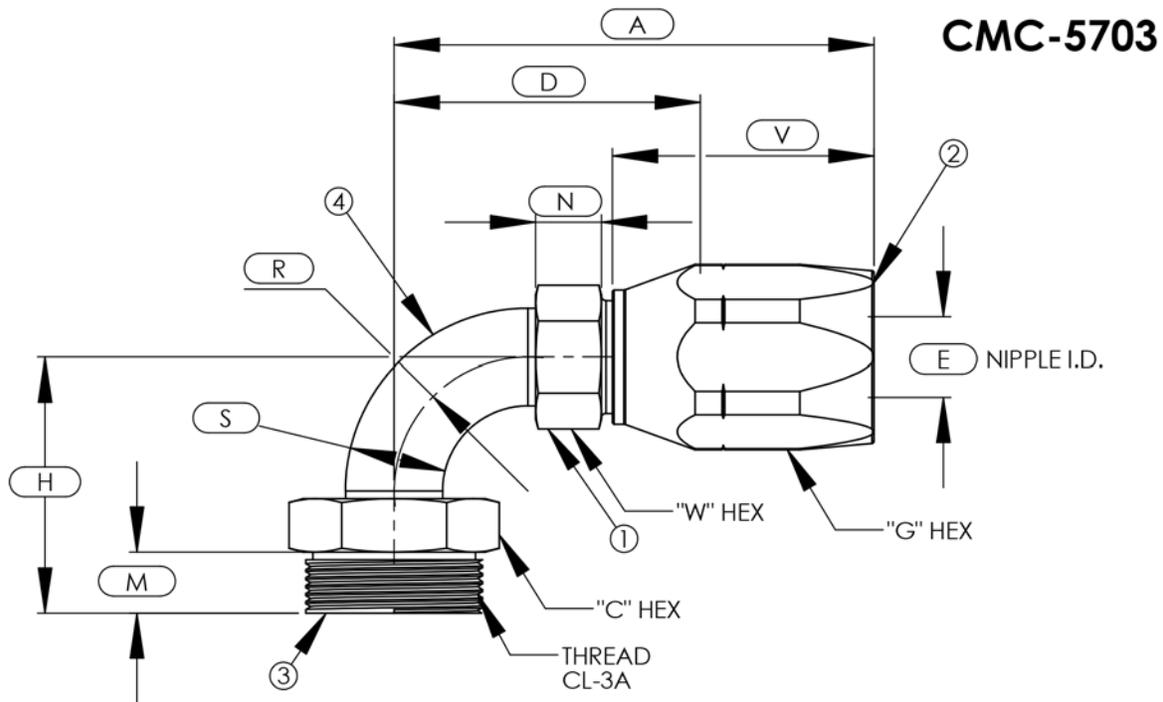
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

Male O-Ring Seal 90°

For MIL-H-24135/2 Type CL
MIL-F-24787/3 Group II, Type CL

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	G	H	M	N	R	S	V	W
CMC-XXX-5703-1/4-06	1/4	1-3/16-12	3.11	1.25	1.63	0.31	1.00	1.43	0.62	0.62	0.50	0.38	1.92	0.69
CMC-XXX-5703-3/8-08	3/8	1-3/8-12	3.44	1.44	1.93	0.39	1.12	1.74	0.62	0.62	0.75	0.50	2.01	0.81
CMC-XXX-5703-1/2-12	1/2	1-3/4-12	4.52	1.81	2.65	0.61	1.50	2.31	0.62	0.74	1.25	0.75	2.47	1.06
CMC-XXX-5703-3/4-16	3/4	2-12	5.25	2.12	3.20	0.82	1.75	2.68	0.62	0.74	1.50	1.00	2.95	1.38
CMC-XXX-5703-1-16	1	2-5/16-12	5.25	2.38	3.20	0.82	1.75	2.92	0.75	0.74	1.50	1.00	2.95	1.38

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5703-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5003-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....CPV-(SIZE)-(MATL CODE)
- ④ MONEL- SIZES 6 THRU 12
- ④ COPPER NICKEL- SIZE 16

-EXAMPLE-

CMC-XX-5703-1/4-06

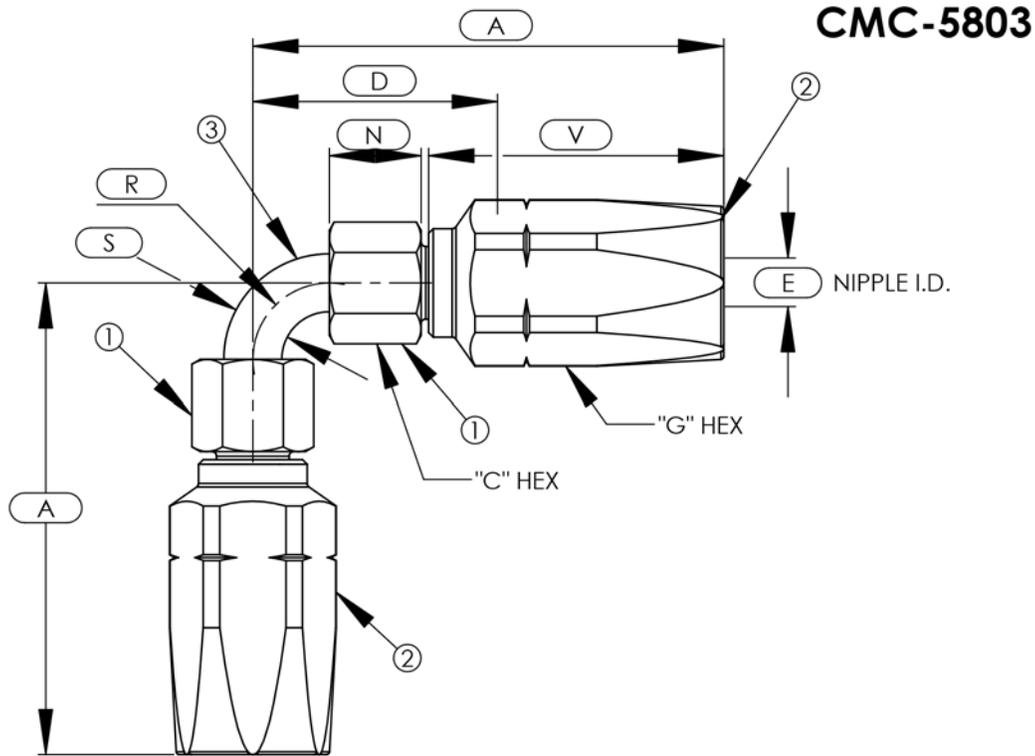
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Dogleg

For MIL-H-24135/2 Type D
MIL-F-24787/5 Group II, Type D

QPL-24787-12



ASSY PART NUMBER	HOSE SIZE	A	C	D	E	G	N	R	S	V
CMC-XX-5803-06-06	3/8	3.11	0.69	1.63	0.31	1.00	0.62	0.50	0.38	1.92
CMC-XX-5803-08-08	1/2	3.44	0.81	1.93	0.39	1.12	0.62	0.75	0.50	2.01
CMC-XX-5803-12-12	3/4	4.52	1.06	2.65	0.61	1.50	0.74	1.25	0.75	2.47
CMC-XX-5803-16-16	1	5.25	1.38	3.20	0.82	1.75	0.74	1.50	1.00	2.95

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5003-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5003-(SIZE)-(MATL CODE)
- ③ MONEL- SIZES 6 THRU 12
- ③ COPPER NICKEL- SIZE 16

-EXAMPLE-

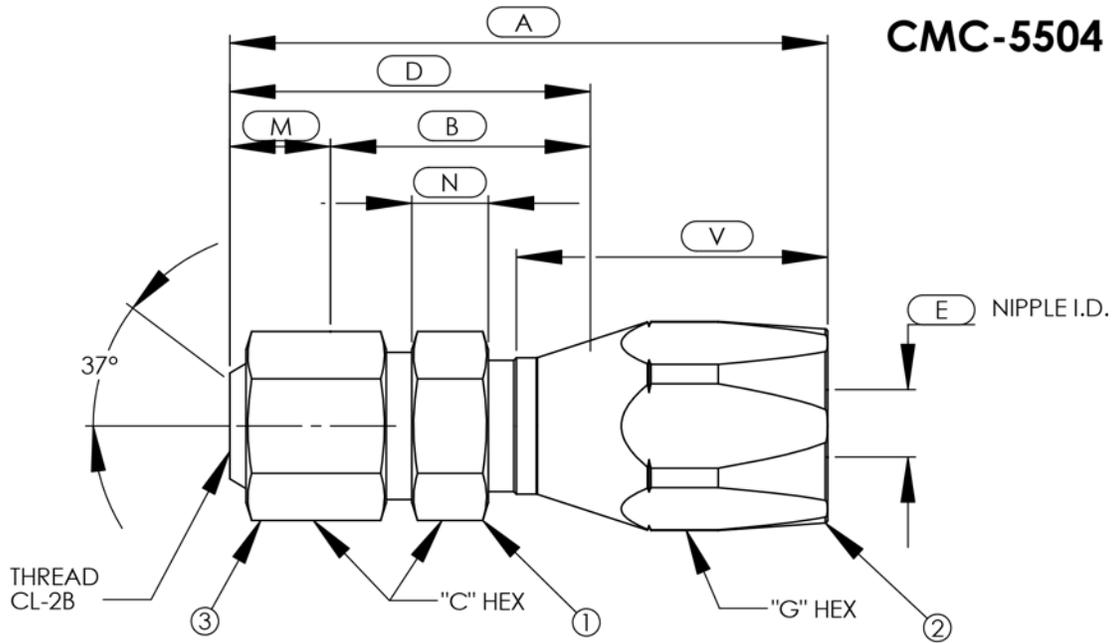
CMC-XX-5803-06-06

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare Semale Swivel

For MIL-H-24135/3 Hose



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	N	V
CMC-4-5504-16-16	1	1-5/16-12	4.48	1.83	1.50	2.43	0.82	1.81	0.60	0.38	2.95

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5504-(SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5004-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....SWIVEL NUT

-EXAMPLE-

CMC-XXX-5504-16-16

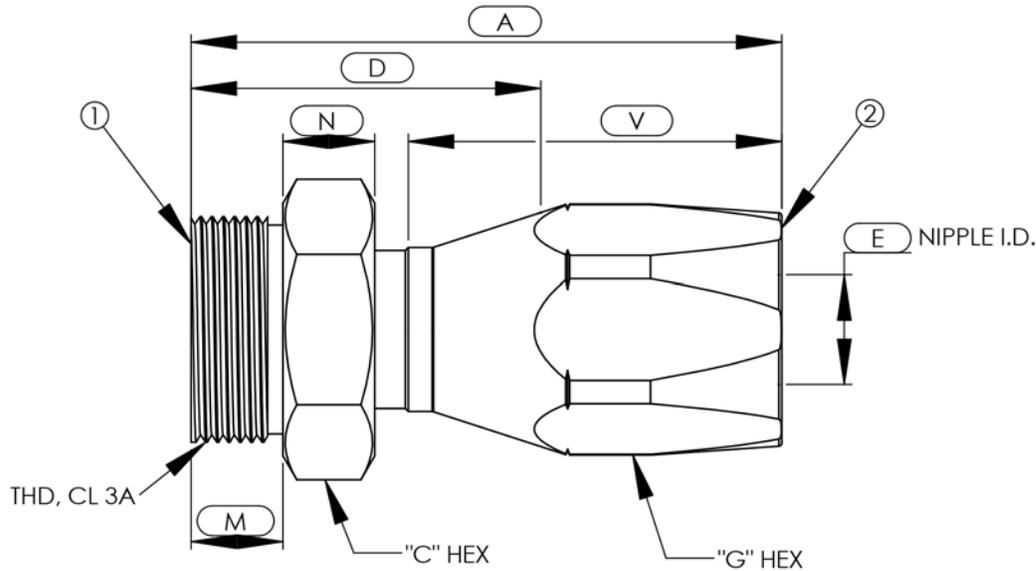
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

Male O-Ring Seal

For MIL-H-24135/3 Hose

CMC-5604



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	G	M	N	V
CMC-XX-5604-1-16	1	2-5/16-12	4.34	2.38	2.28	0.82	1.81	.075	0.62	2.95

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5604-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5004-(SIZE)-(MATL CODE)

-EXAMPLE-

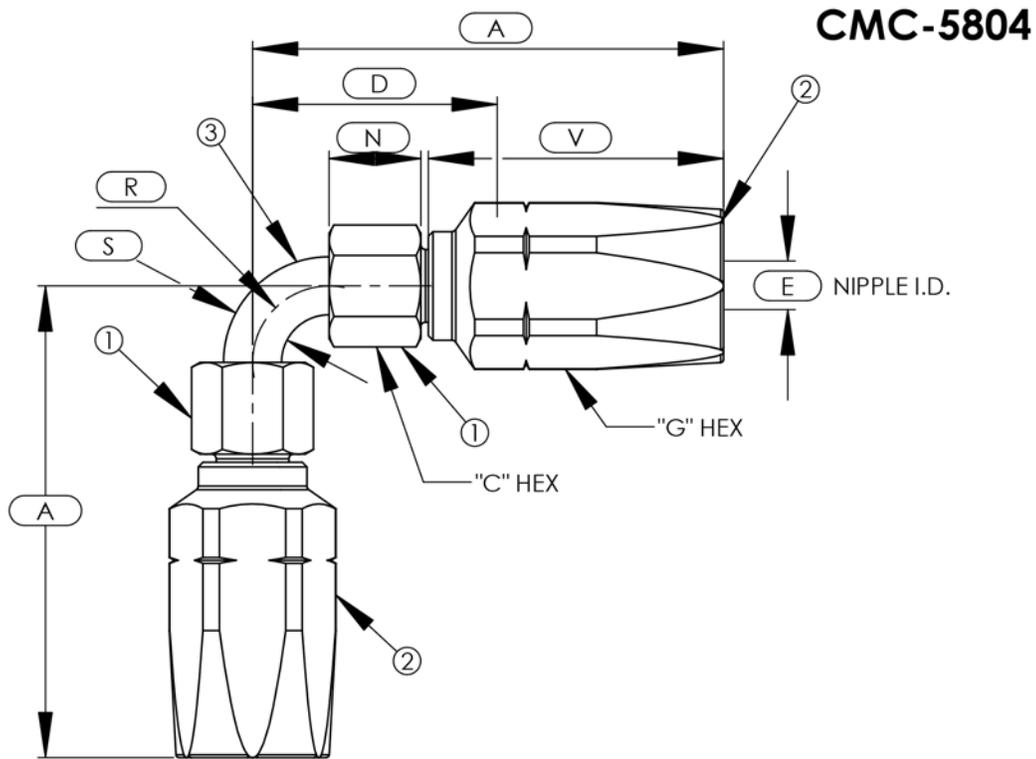
CMC-XX-5604-1-16

└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Dogleg

For MIL-H-24135/3 Hose



ASSY PART NUMBER	HOSE SIZE	A	C	D	E	G	N	R	S	V
CMC-XX-5804-16-16	1	5.25	1.38	3.20	0.82	1.81	.074	1.50	1.00	2.95

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5004-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5004-(SIZE)-(MATL CODE)
- ③ COPPER NICKEL- SIZE 16.....TUBE

-EXAMPLE-

CMC-XX-5804-16-16

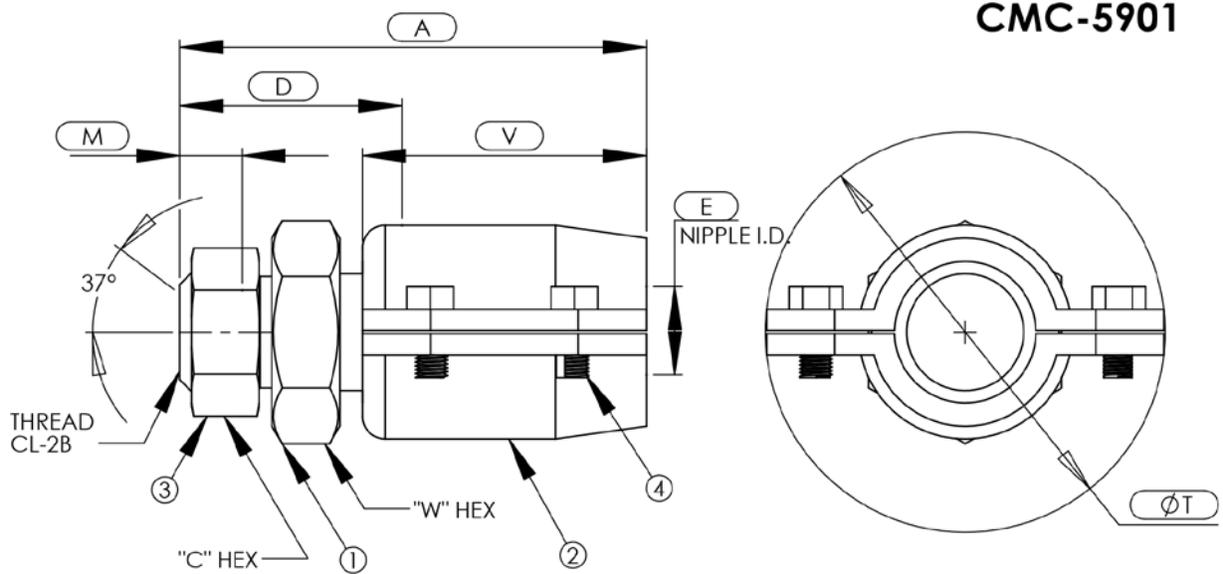
└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare Female Swivel

For MIL-H-24136/2 Type G
MIL-F-24787/2 Group XI, Type A

QPL-24787-12



ASSY PART NUMBER	O.D. TUBE SIZE	THREAD	A	C	D	E	M	T	V	W
CMC-XXX-5901-06-06	3/8*	9/16-18	3.10	0.69	1.48	0.26	0.40	2.34	2.00	0.94
CMC-XXX-5901-08-08	1/2*	3/4-16	3.31	0.88	1.59	0.39	0.44	2.66	2.10	1.00
CMC-XXX-5901-10-08	5/8*	7/8-14	3.42	1.00	1.70	0.39	0.52	2.66	2.10	1.00
CMC-XXX-5901-12-08	3/4*	1-1/16-12	3.52	1.25	1.80	0.39	0.57	2.66	2.10	1.25
CMC-XXX-5901-12-12	3/4*	1-1/16-12	3.85	1.25	1.95	0.61	0.57	3.27	2.42	1.31
CMC-XXX-5901-16-12	1*	1-5/16-12	4.05	1.50	2.15	0.61	0.60	3.27	2.42	1.62
CMC-XXX-5901-16-16	1	1-5/16-12	4.05	1.50	2.14	0.82	0.60	4.02	2.42	1.62
CMC-XXX-5901-20-20	1-1/4	1-5/8-12	4.62	2.00	2.53	1.05	0.64	4.31	2.80	2.00
CMC-XXX-5901-24-20	1-1/2	1-7/8-12	4.89	2.25	2.80	1.05	0.74	4.31	2.80	2.25
CMC-XXX-5901-32-32	2	2-1/2-12	6.37	2.88	3.29	1.75	0.93	5.65	3.88	2.88

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5901-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....CL-10-(HOSE SIZE)-(MATL CODE)
- ③ ALL SIZES-.....SWIVEL NUT
- ④ K-MONEL- ALL SIZES.....BT-(SIZE)-(LENGTH)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5901-06-06

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

*REQUIRES 2 BOLTS ONLY PER SOCKET ASSY.

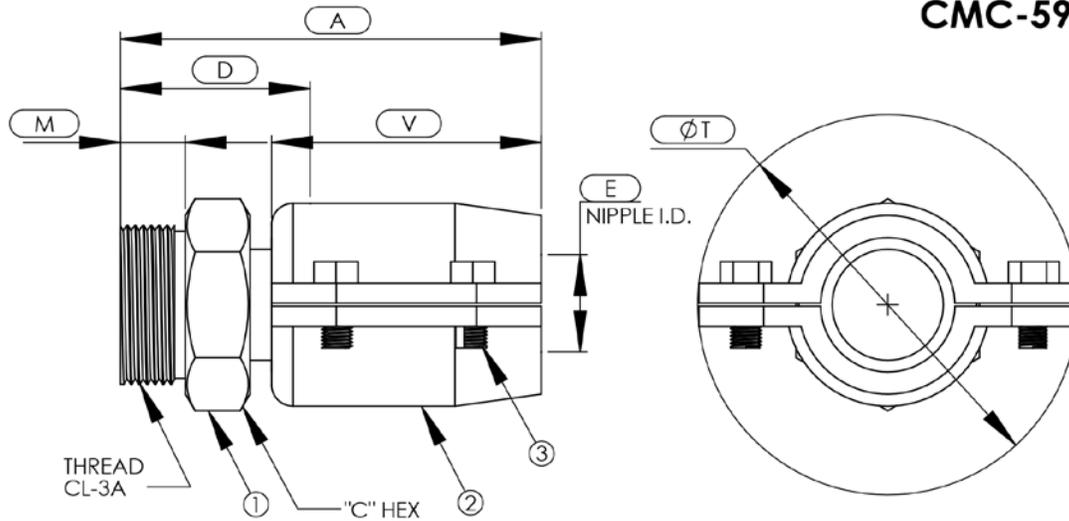
CMC® Hose End Fittings

Male O-Ring Seal

For MIL-H-24136/2 Type I
MIL-F-24787/3 Group XI, Type C

QPL-24787-12

CMC-5902



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	M	T	V
CMC-XX-5902-1/4-06	1/4*	1-3/16-12	2.90	1.25	1.28	0.26	0.62	2.34	2.00
CMC-XX-5902-1/4-08	1/4*	1-3/16-12	3.02	1.25	1.30	0.31	0.62	2.66	2.10
CMC-XX-5902-3/8-08	3/8*	1-3/8-12	3.08	1.44	1.36	0.39	0.62	2.66	2.10
CMC-XX-5902-1/2-08	1/2*	1-3/4-12	3.14	1.81	1.32	0.39	0.62	2.66	2.10
CMC-XX-5902-1/2-12	1/2*	1-3/4-12	3.48	1.81	1.58	0.50	0.62	3.27	2.42
CMC-XX-5902-3/4-16	3/4	2-12	3.60	2.12	1.69	0.62	0.62	4.02	2.42
CMC-XX-5902-1-16	1	2-5/16-12	3.84	2.38	1.93	0.81	0.75	4.02	2.42
CMC-XX-5902-1-20	1	2-5/16-12	4.20	2.38	2.11	0.81	0.75	4.31	2.80
CMC-XX-5902-1-1/4-20	1-1/4	2-3/4-12	4.34	2.88	2.24	1.05	0.75	4.31	2.80
CMC-XX-5902-1-1/4-24	1-1/4	2-3/4-12	4.42	2.88	2.12	1.30	0.75	4.69	3.01
CMC-XX-5902-1-1/2-24	1-1/2	3-1/16-12	4.68	3.12	2.38	1.30	0.88	4.69	3.01
CMC-XX-5902-1-1/2-32	1-1/2	3-1/16-12	5.56	3.12	2.48	1.39	0.88	5.65	3.88
CMC-XX-5902-2-32	2	3-3/4-12	5.56	3.88	2.48	1.75	0.88	5.65	3.88

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5902-(IPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....CL-10-(HOSE SIZE)-(MATL CODE)
- ③ K-MONEL- ALL SIZES.....BT-(SIZE)-(LENGTH)-(MATL CODE)

-EXAMPLE-

CMC-XX-5902-1/4-06

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

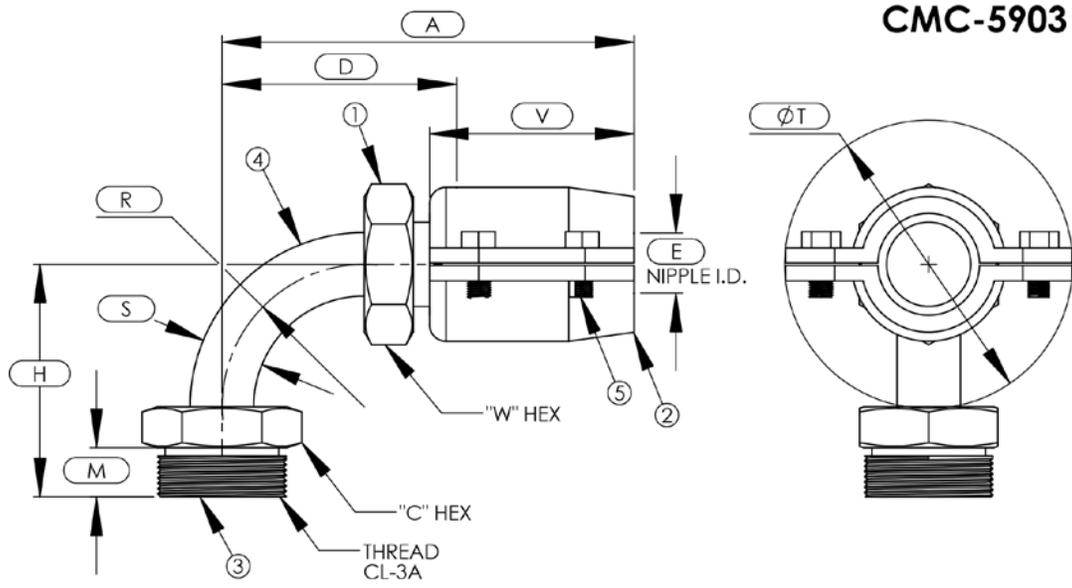
*REQUIRES 2 BOLTS
ONLY PER SOCKET ASSY.

CMC® Hose End Fittings

Male O-Ring Seal 90°

For MIL-H-24136/2 Type IL
MIL-F-24787/3 Group XI, Type CL

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	H	M	R	S	T	V	W
CMC-XXX-5903-1/4-06	1/4*	1-3/16-12	3.20	1.25	1.58	0.26	1.43	0.62	0.50	0.38	2.34	2.00	0.94
CMC-XXX-5903-1/4-08	1/4*	1-3/16-12	3.56	1.25	1.84	0.39	1.68	0.62	0.75	0.50	2.66	2.10	1.00
CMC-XXX-5903-3/8-06	3/8*	1-3/8-12	3.56	1.44	1.84	0.39	1.74	0.62	0.75	0.50	2.66	2.10	1.00
CMC-XXX-5903-1/2-12	1/2*	1-3/4-12	4.51	1.81	2.61	0.61	2.31	0.62	1.25	0.75	3.27	2.42	1.31
CMC-XXX-5903-3/4-16	3/4	2-12	4.76	2.12	2.85	0.82	2.68	0.62	1.50	1.00	4.02	2.42	1.62
CMC-XXX-5903-1-16	1	2-5/16-12	4.76	2.38	2.85	0.82	2.92	0.75	1.50	1.00	4.02	2.42	1.62
CMC-XXX-5903-1-20	1	2-5/16-12	5.50	2.38	3.40	1.05	3.17	0.75	1.75	1.25	4.31	2.80	2.00
CMC-XXX-5903-1-1/4-20	1-1/4	2-3/4-12	5.50	2.88	3.40	1.05	3.17	0.75	1.75	1.25	4.31	2.80	2.00
CMC-XXX-5903-1-1/2-24	1-1/2	3-1/16-12	5.96	3.12	3.66	1.30	3.55	0.88	2.00	1.50	4.69	3.01	2.25
CMC-XXX-5903-1-1/2-32	1-1/2	3-1/16-12	7.60	3.12	4.52	1.75	4.05	0.88	2.50	2.00	5.65	3.88	2.75
CMC-XXX-5903-2-32	2	3-3/4-12	7.60	3.88	4.52	1.75	4.05	0.88	2.50	2.00	5.65	3.88	2.75

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5900-(IPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....CL-10-(HOSE SIZE)-(MATL CODE)
- ③ ALL SIZES-.....CPV-(IPS)-(TUBE SIZE)-(MATL CODE)
- ④ MONEL- SIZES 6 THRU 12.....TUBE
- ④ COPPER NICKEL- SIZES 16 THRU 32....TUBE
- ⑤ K-MONEL- ALL SIZES.....BT-(SIZE)-(LENGTH)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5903-1/4-06

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

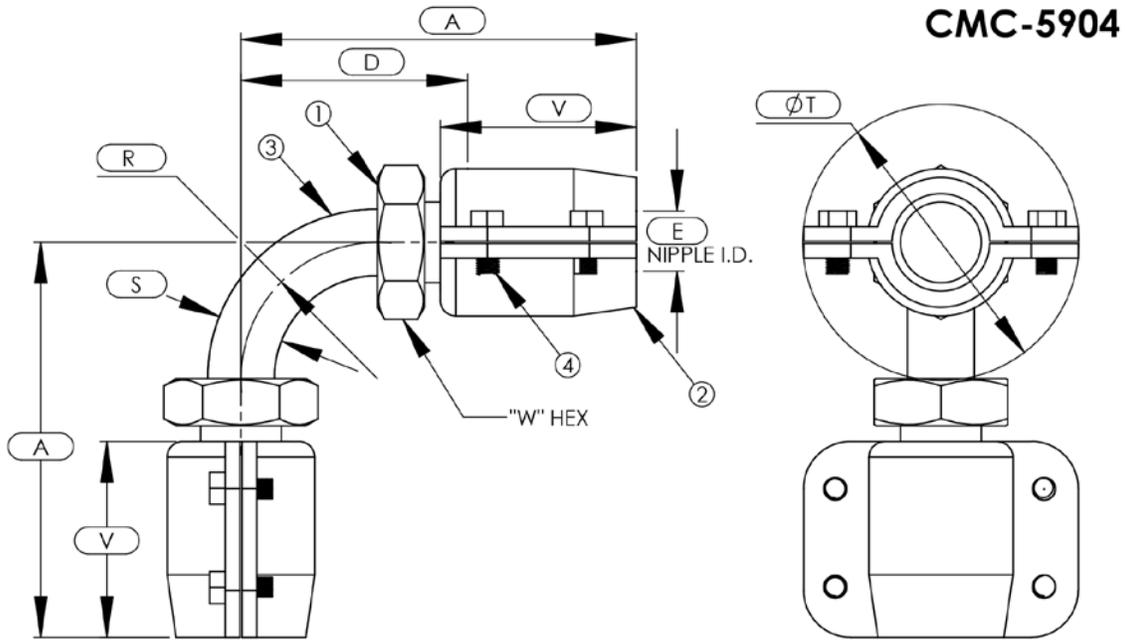
*REQUIRES
2 BOLTS ONLY
PER SOCKET
ASSY.

CMC® Hose End Fittings

90° Dogleg

For MIL-H-24136/2 Type E
MIL-F-24787/5 Group XI, Type D

QPL-24787-12



ASSY PART NUMBER	HOSE I.D.	A	D	E	R	S	T	V	W
CMC-XX-5904-06-06	3/8*	3.20	1.58	0.26	0.50	0.38	2.34	2.00	0.94
CMC-XX-5904-08-08	1/2*	3.56	1.84	0.39	0.75	0.50	2.66	2.10	1.00
CMC-XX-5904-12-12	3/4*	4.51	2.61	0.61	1.25	0.75	3.27	2.42	1.31
CMC-XX-5904-16-16	1	4.76	2.85	0.82	1.50	1.00	4.02	2.42	1.62
CMC-XX-5904-20-20	1-1/4	5.50	3.40	1.05	1.75	1.25	4.31	2.80	2.00
CMC-XX-5904-24-24	1-1/2	5.96	3.66	1.30	2.00	1.50	4.69	3.01	2.25
CMC-XX-5904-32-32	2	7.60	4.52	1.75	2.50	2.00	5.65	3.88	2.75

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5900-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....CL-10-(HOSE SIZE)-(MATL CODE)
- ③ MONEL- SIZES 6 THRU 12.....TUBE
- ③ COPPER NICKEL- SIZES 16 THRU 32....TUBE
- ④ K-MONEL- ALL SIZES.....BT-(SIZE)-(LENGTH)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5904-06-06

└ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

*REQUIRES
2 BOLTS ONLY
PER SOCKET
ASSY.

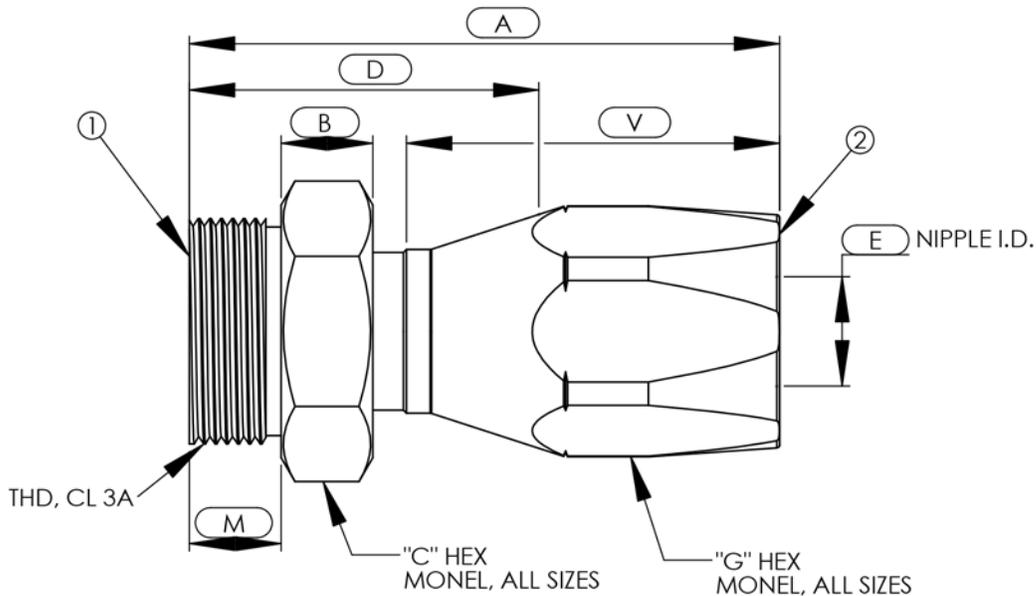
CMC® Hose End Fittings

For MIL-H-24136/3 Type I
MIL-F-24787/3 Group VIII, Type C

Male O-Ring Seal

QPL-24787-12

CMC-5601



ASSY PART NUMBER	IPS SIZE	THREAD	A	B	C	D	E	G	M	V
CMC-XX-5601-1/8-06	1/8	1-14	2.06	.25	1.06	1.16	.24	.81	.50	1.30
CMC-XX-5601-1/4-08	1/4	1-3/16-12	2.54	.25	1.25	1.39	.36	.94	.62	1.65
CMC-XX-5601-3/8-08	3/8	1-3/8-12	2.59	.31	1.44	1.46	.36	.94	.62	1.65
CMC-XX-5601-3/8-10	3/8	1-3/8-12	2.75	.31	1.44	1.46	.46	1.12	.62	1.80
CMC-XX-5601-1/2-12	1/2	1-3/4-12	3.12	.38	1.81	1.55	.55	1.25	.62	2.10
CMC-XX-5601-3/4-16	3/4	2-12	2.80	.50	2.12	1.53	.62	1.44	.62	1.66
CMC-XX-5601-1-20	1	2-5/16-12	3.14	.62	2.38	1.77	.81	1.75	.75	1.75
CMC-XX-5601-1-1/4-24	1-1/4	2-3/4-12	3.23	.62	2.88	1.78	1.25	1.94	.75	1.84
CMC-XX-5601-1-1/2-32	1-1/2	3-1/16-12	3.89	.75	3.12	2.05	1.39	2.44	.88	2.25
CMC-XX-5601-2-32	2	3-3/4-12	3.89	.75	3.88	2.05	1.75	2.44	.88	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5601-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

-EXAMPLE-

CMC-XX-5601-1/8-06

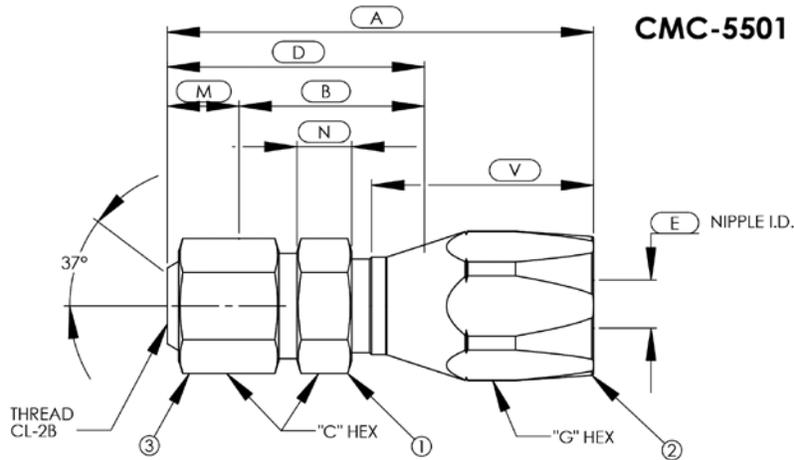
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare Female Swivel

For MIL-H-24136/3 Type G
MIL-F-24787/2 Group VIII, Type A

QPL-24787-12



PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	N	V
CMC-XXX-5501-04-04	4	7/16-20	1.97	0.86	0.56	1.23	0.13	0.62	0.37	0.22	1.10
CMC-XXX-5501-04-05	5	7/16-20	2.08	0.93	0.56	1.30	0.17	0.69	0.37	0.25	1.20
CMC-XXX-5501-05-05	5	1/2-20	2.12	0.93	0.62	1.35	0.18	0.69	0.40	0.25	1.20
CMC-XXX-5501-06-06	6	9/16-18	2.33	1.00	0.69	1.43	0.24	0.81	0.40	0.28	1.30
CMC-XXX-5501-08-06	6	3/4-16	2.42	1.13	0.88	1.52	0.24	0.94	0.44	0.31	1.65
CMC-XXX-5501-06-08	8	9/16-18	2.68	1.03	0.69	1.53	0.30	0.81	0.44	0.28	1.30
CMC-XXX-5501-08-08	8	3/4-16	2.78	1.18	0.88	1.62	0.36	0.94	0.44	0.31	1.65
CMC-XXX-5501-08-10	10	3/4-16	2.92	1.20	0.88	1.64	0.39	1.12	0.44	0.31	1.80
CMC-XXX-5501-10-10	10	7/8-14	3.10	1.29	1.00	1.81	0.46	1.12	0.52	0.31	1.80
CMC-XXX-5501-12-10	10	1-1/16-12	3.19	1.34	1.25	1.91	0.46	1.12	0.57	0.31	1.80
CMC-XXX-5501-10-12	12	7/8-14	3.40	1.31	1.00	1.83	0.55	1.25	0.52	0.38	2.10
CMC-XXX-5501-12-12	12	1-1/16-12	3.49	1.35	1.25	1.92	0.55	1.25	0.57	0.38	2.10
CMC-XXX-5501-16-16	16	1-5/16-12	3.19	1.33	1.50	1.93	0.82	1.44	0.60	0.50	1.66
CMC-XXX-5501-20-20	20	1-5/8-12	3.43	1.43	2.00	2.07	1.05	1.75	0.64	0.50	1.75
CMC-XXX-5501-20-24	24	1-5/8-12	3.65	1.55	2.00	2.19	1.06	1.94	0.64	0.50	1.84
CMC-XXX-5501-24-24	24	1-7/8-12	3.68	1.48	2.25	2.22	1.28	1.94	0.74	0.50	1.84
CMC-XXX-5501-32-32	32	2-1/2-12	4.39	1.62	2.88	2.55	1.69	2.44	0.93	0.75	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5501-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(HOSE SIZE)-(MATL CODE)

③ ALL SIZES-.....SWIVEL NUT

-EXAMPLE-

CMC-XXX-5501-04-04

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS



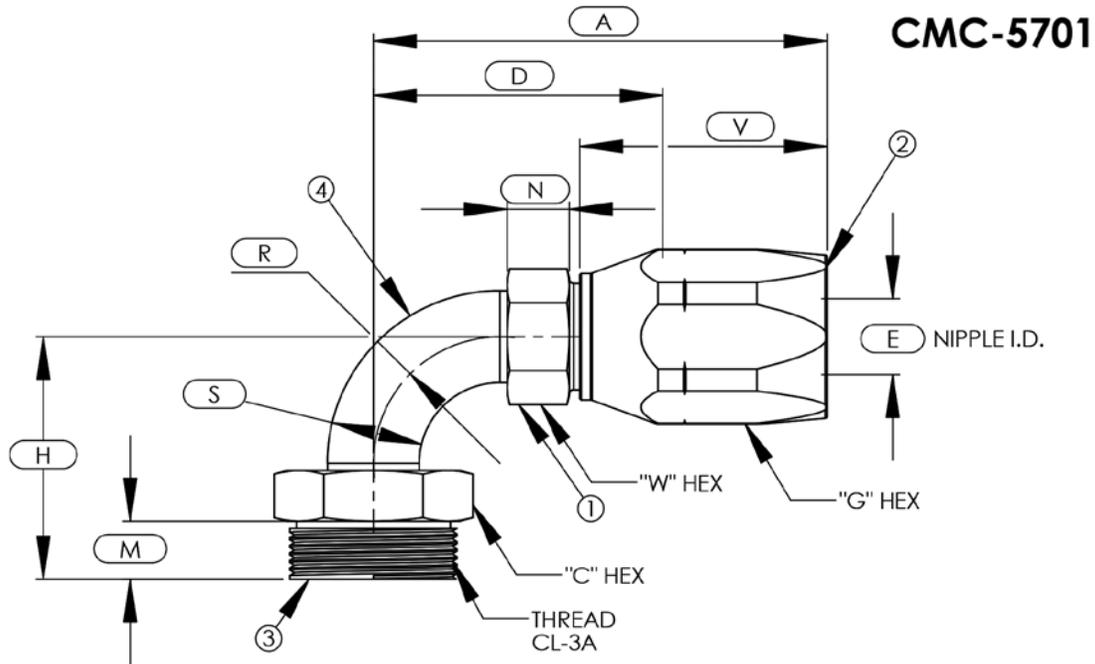
HOW MAY WE HELP YOU?
For assistance call 253-854-4666
www.customhydraulic.com

CMC® Hose End Fittings

Male O-Ring Seal, 90°

For MIL-H-24136/3 Type IL
MIL-F-24787/3 Group VIII, Type CL

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	THREAD	A	C	D	E	G	H	M	N	R	S	V	W
CMC-XXX-5701-1/8-06	1/8	1-14	2.45	1.06	1.55	0.24	0.81	1.30	0.50	0.58	0.50	0.38	1.30	0.56
CMC-XXX-5701-1/4-08	1/4	1-3/16-12	3.05	1.25	1.90	0.36	0.94	1.68	0.62	0.58	0.75	0.50	1.65	0.75
CMC-XXX-5701-3/8-10	3/8	1-3/8-12	3.57	1.44	2.28	0.46	1.12	1.99	0.62	0.70	1.00	0.62	1.80	0.81
CMC-XXX-5701-1/2-12	1/2	1-3/4-12	4.15	1.81	2.58	0.55	1.25	2.31	0.62	0.74	1.25	0.75	2.10	1.00
CMC-XXX-5701-3/4-16	3/4	2-12	3.93	2.12	2.66	0.82	1.44	2.68	0.62	0.70	1.50	1.00	1.66	1.38
CMC-XXX-5701-1-20	1	2-5/16-12	4.27	2.38	2.91	1.05	1.75	3.17	0.75	0.70	1.75	1.25	1.75	1.62
CMC-XXX-5701-1-1/4-24	1-1/4	2-3/4-12	4.65	2.88	3.19	1.28	1.94	3.42	0.75	0.74	2.00	1.50	1.84	1.81
CMC-XXX-5701-1-1/2-32	1-1/2	3-1/16-12	5.68	3.12	3.84	1.69	2.44	4.05	0.88	0.86	2.50	2.00	2.25	2.38
CMC-XXX-5701-2-32	2	3-3/4-12	5.68	3.88	3.84	1.69	2.44	4.05	0.88	0.86	2.50	2.00	2.25	2.38

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5001-(IPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....CPV-(TUBE SIZE)-(IPS SIZE)-(MATL CODE)
- ④ MONEL- SIZES 6 THRU 12.....TUBE
- ④ COPPER NICKEL-SIZES 16 THRU 32...TUBE

-EXAMPLE-

CMC-XXX-5701-1/8-06

└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

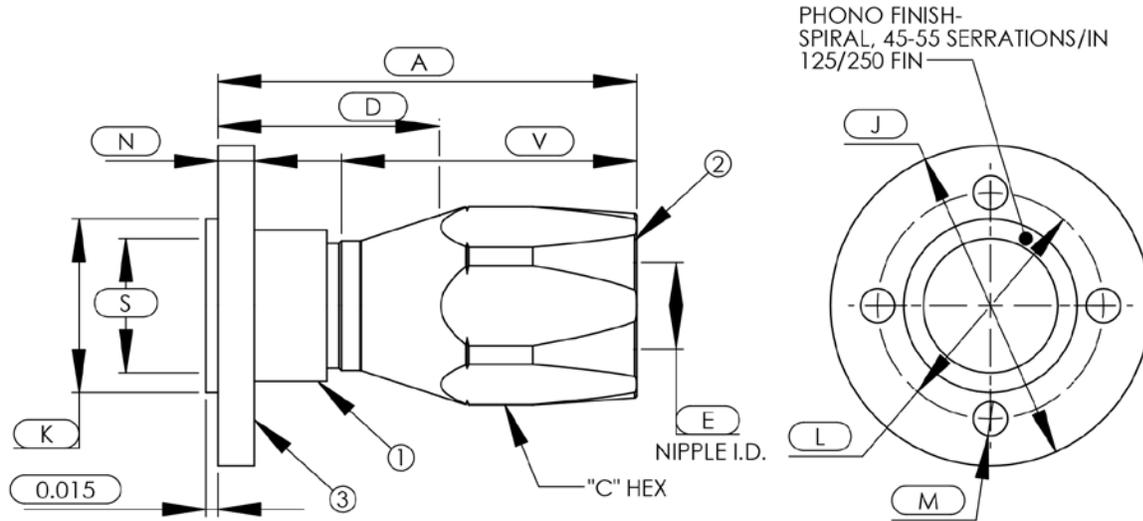
CMC® Hose End Fittings

Straight Flange

Per MIL-H-24136/3 Type AI
MIL-F-24787/1 Group VIII, Type F
MIL-H-20042 400 Lb Flange

QPL-24787-12

CMC-5111



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C NOM	D	E	J	K	L	M	N	S	V
CMC-XXX-5111-1/2-16	1/2	4	2.80	1.44	1.53	.82	4.00	1.50	2.88	.56	.69	.71	1.66
CMC-XXX-5111-3/4-16	3/4	4	2.80	1.44	1.53	.82	4.31	1.50	3.19	.56	.69	.71	1.66
CMC-XXX-5111-1-16	1	5	2.80	1.44	1.53	.82	5.06	1.50	3.75	.69	.75	.71	1.66
CMC-XXX-5111-3/4-20	3/4	4	2.89	1.75	1.53	1.05	4.31	1.84	3.19	.56	.69	.92	1.75
CMC-XXX-5111-1-24	1	5	2.92	1.94	1.47	1.16	5.06	2.12	3.75	.69	.75	1.18	1.84
CMC-XXX-5111-1-1/4-32	1-1/4	5	3.51	2.44	1.66	1.69	5.38	2.74	4.06	.69	.81	1.53	2.25
CMC-XXX-5111-1-1/2-32	1-1/2	6	3.51	2.44	1.66	1.69	5.94	2.74	4.63	.69	.81	1.77	2.25
CMC-XXX-5111-2-32	2	7	3.51	2.44	1.66	1.69	6.50	2.74	5.19	.69	.81	1.77	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5111-1/2-06

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

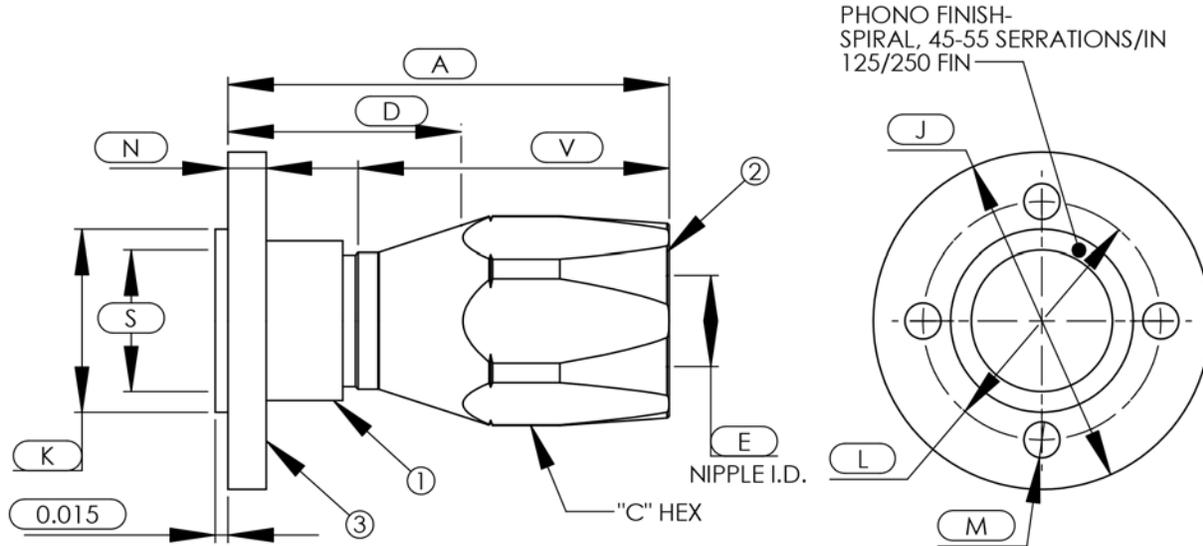
CMC® Hose End Fittings

Straight Flange

Per MIL-H-24136/3 Type All
 MIL-F-24787/1 Group VIII, Type F
 MIL-F-20042 150 Lb Flange (with 400 Lb Thick Flange)

QPL-24787-12

CMC-5121



PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C NOM	D	E	J	K	L	M	N	S	V
CMC-XXX-5121-1/2-16	1/2	3	2.80	1.44	1.53	.82	3.56	1.50	2.44	.56	.69	.71	1.66
CMC-XXX-5121-3/4-16	3/4	4	2.80	1.44	1.53	.82	3.81	1.50	2.69	.56	.69	.71	1.66
CMC-XXX-5121-1-16	1	4	2.80	1.44	1.53	.82	4.25	1.50	3.13	.56	.75	.71	1.66
CMC-XXX-5121-3/4-20	3/4	4	2.89	1.75	1.53	1.05	3.81	1.84	2.69	.56	.69	.92	1.75
CMC-XXX-5121-1-24	1	4	2.92	1.94	1.47	1.16	4.25	2.12	3.13	.56	.75	1.18	1.84
CMC-XXX-5121-1-1/4-32	1-1/4	4	3.51	2.44	1.66	1.69	4.50	2.74	3.38	.56	.81	1.53	2.25
CMC-XXX-5121-1-1/2-32	1-1/2	6	3.51	2.44	1.66	1.69	5.06	2.74	3.94	.56	.81	1.77	2.25
CMC-XXX-5121-2-32	2	6	3.51	2.44	1.66	1.69	5.56	2.74	4.44	.56	.81	1.77	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5121-1/2-16

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

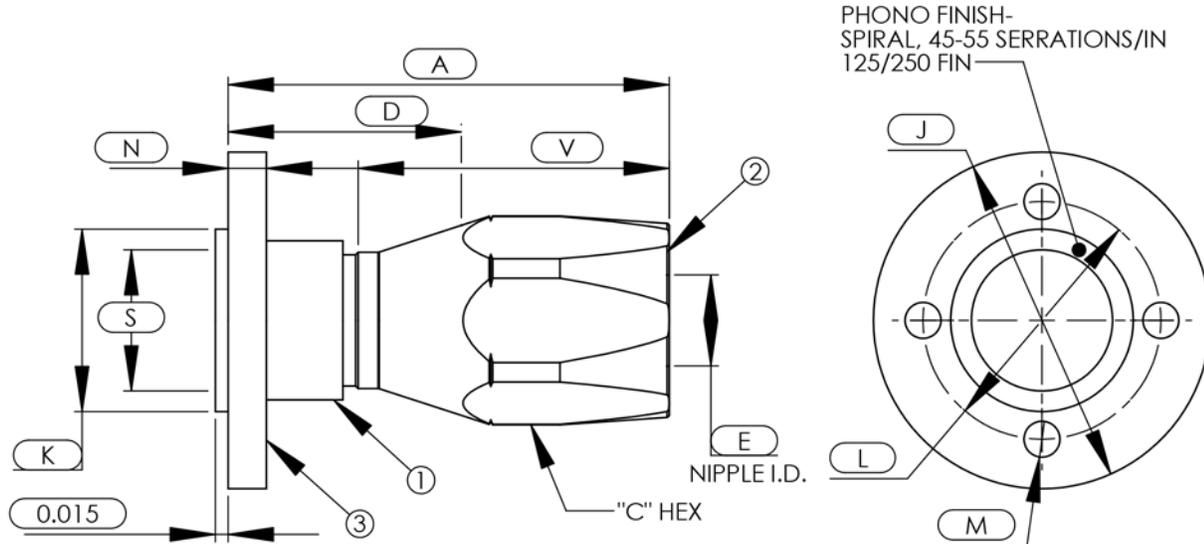
CMC® Hose End Fittings

Straight Flange

Per MIL-H-24136/3 Type AIII
 MIL-F-24787/1 Group VIII, Type F
 MIL-F-20042 250 Lb Flange

QPL-24787-12

CMC-5131



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C NOM	D	E	J	K	L	M	N	S	V
CMC-XXX-5131-1/2-16	1/2	3	2.80	1.44	1.53	.82	3.56	1.50	2.44	.56	.69	.71	1.66
CMC-XXX-5131-3/4-16	3/4	4	2.80	1.44	1.53	.82	3.81	1.50	2.69	.56	.69	.71	1.66
CMC-XXX-5131-1-16	1	4	2.80	1.44	1.53	.82	4.25	1.50	3.13	.56	.75	.71	1.66
CMC-XXX-5131-3/4-20	3/4	4	2.89	1.75	1.53	1.05	3.81	1.84	2.69	.56	.69	.92	1.75
CMC-XXX-5131-1-24	1	4	2.92	1.94	1.47	1.16	4.25	2.12	3.13	.56	.75	1.18	1.84
CMC-XXX-5131-1-1/4-32	1-1/4	4	3.51	2.44	1.66	1.69	4.50	2.74	3.38	.56	.81	1.53	2.25
CMC-XXX-5131-1-1/2-32	1-1/2	6	3.51	2.44	1.66	1.69	5.06	2.74	3.94	.56	.81	1.77	2.25
CMC-XXX-5131-2-32	2	6	3.51	2.44	1.66	1.69	5.56	2.74	4.44	.69	.81	1.77	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5131-1/2-16

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

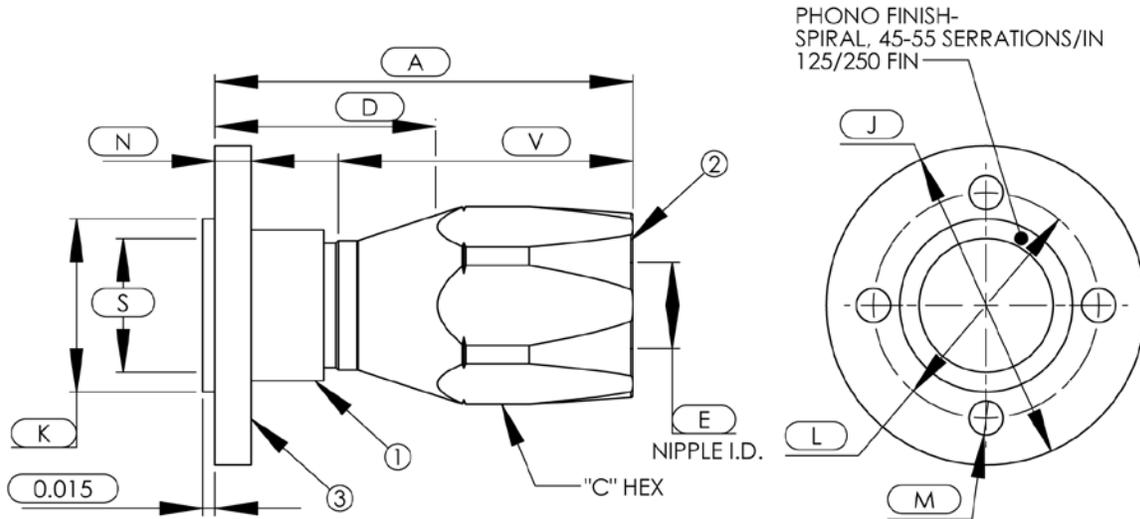
CMC® Hose End Fittings

Straight Flange

Per MIL-H-24136/3 Type AIV
 MIL-F-24787/1 Group VIII, Type F
 MIL-F-20042 150 Lb Flange

QPL-24787-12

CMC-5141



PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C NOM	D	E	J	K	L	M	N	S	V
CMC-XXX-5141-1/2-16	1/2	3	2.80	1.44	1.53	.82	3.56	1.50	2.44	.56	.38	.71	1.66
CMC-XXX-5141-3/4-16	3/4	4	2.80	1.44	1.53	.82	3.81	1.50	2.69	.56	.44	.71	1.66
CMC-XXX-5141-1-16	1	4	2.80	1.44	1.53	.82	4.25	1.50	3.13	.56	.44	.71	1.66
CMC-XXX-5141-3/4-20	3/4	4	2.89	1.75	1.53	1.05	3.81	1.84	2.69	.56	.44	.92	1.75
CMC-XXX-5141-1-24	1	4	2.92	1.94	1.47	1.16	4.25	2.12	3.13	.56	.44	1.18	1.84
CMC-XXX-5141-1-1/4-32	1-1/4	4	3.51	2.44	1.66	1.69	4.50	2.74	3.38	.56	.44	1.53	2.25
CMC-XXX-5141-1-1/2-32	1-1/2	6	3.51	2.44	1.66	1.69	5.06	2.74	3.94	.56	.44	1.77	2.25
CMC-XXX-5141-2-32	2	6	3.51	2.44	1.66	1.69	5.56	2.74	4.44	.56	.44	1.77	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5141-1/2-16

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

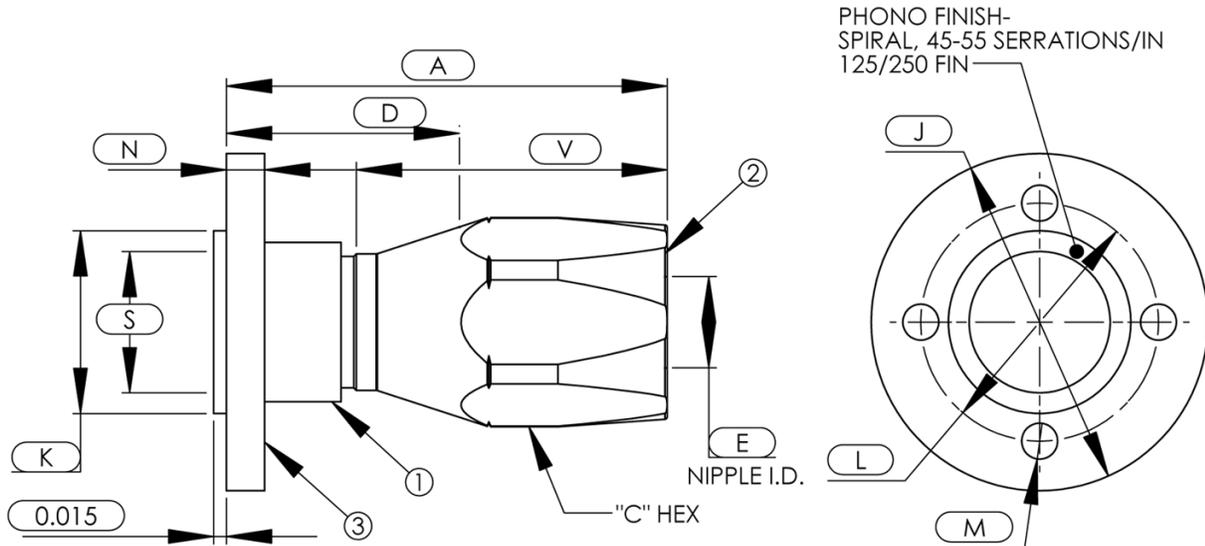
CMC® Hose End Fittings

Straight Flange

Per MIL-H-24136/3 Type AV
 MIL-F-24787/1 Group VIII, Type F
 ANSI-B16.5 150 Lb Flange

QPL-24787-12

CMC-5151



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C NOM	D	E	J	K	L	M	N	S	V
CMC-XXX-5151-1/2-16	1/2	4	2.80	1.44	1.53	.82	3.50	1.50	2.38	.62	.36	.71	1.66
CMC-XXX-5151-3/4-16	3/4	4	2.80	1.44	1.53	.82	3.88	1.50	2.75	.62	.42	.71	1.66
CMC-XXX-5151-1-16	1	4	2.80	1.44	1.53	.82	4.25	1.50	3.13	.62	.42	.71	1.66
CMC-XXX-5151-3/4-20	3/4	4	2.89	1.75	1.53	1.05	3.88	1.84	2.75	.62	.42	.92	1.75
CMC-XXX-5151-1-24	1	4	2.92	1.94	1.47	1.28	4.25	2.12	3.13	.62	.42	1.18	1.84
CMC-XXX-5151-1-1/4-32	1-1/4	4	3.51	2.44	1.66	1.69	4.63	2.74	3.50	.62	.42	1.53	2.25
CMC-XXX-5151-1-1/2-32	1-1/2	4	3.51	2.44	1.66	1.69	5.00	2.74	3.88	.62	.42	1.77	2.25
CMC-XXX-5151-2-32	2	4	3.51	2.44	1.66	1.69	6.00	2.74	4.75	.75	.42	1.77	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5100-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5151-1/2-16

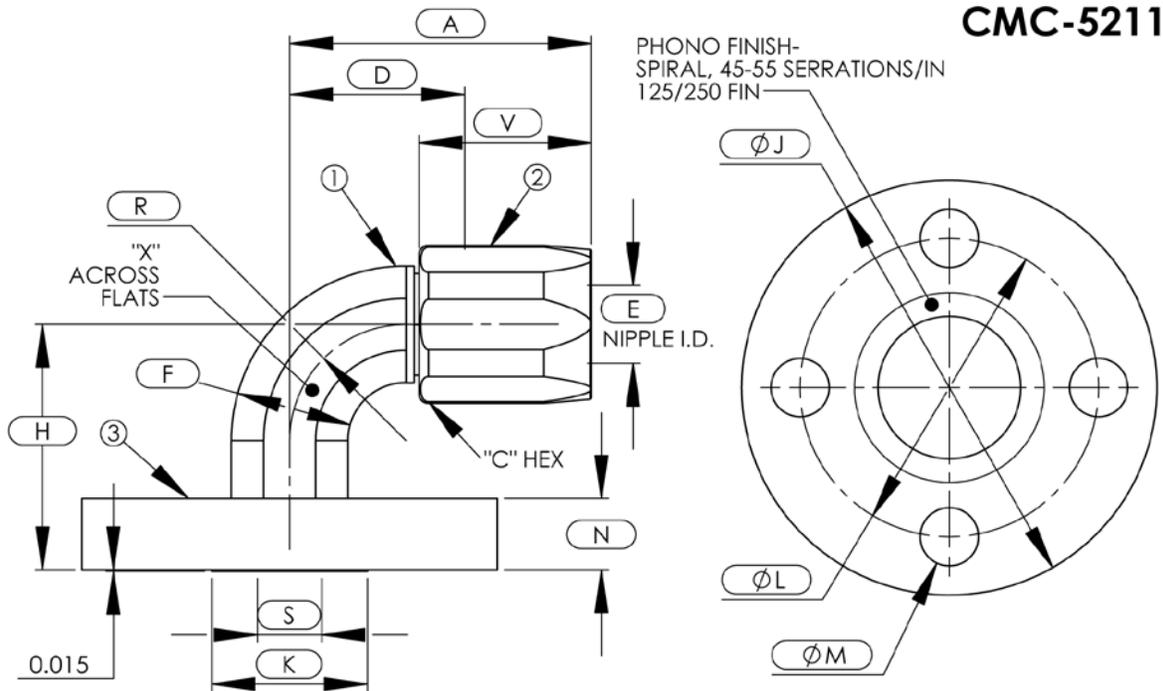
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

Per MIL-H-24136/3 Type BI
 MIL-F-24787/1 Group VIII, Type FL
 MIL-F-20042 400 Lb Flange

QPL-24787-12



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C	D	E	F	H	J	K	L	M	N	R	S	V	X
CMC-XXX-5211-1/2-16	1/2	4	2.80	1.44	1.53	0.75	1.25	2.38	4.00	1.50	2.88	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5211-3/4-16	3/4	4	2.80	1.44	1.53	0.75	1.25	2.38	4.31	1.50	3.19	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5211-1-16	1	5	2.80	1.44	1.53	0.75	1.25	2.38	5.06	1.50	3.75	.69	.75	1.12	0.71	1.16	1.19
CMC-XXX-5211-3/4-20	3/4	4	2.98	1.75	1.62	1.00	1.62	2.56	4.31	1.84	3.19	.56	.69	1.22	0.82	1.75	1.44
CMC-XXX-5211-1-24	1	5	3.24	1.94	1.78	1.16	1.81	2.75	5.06	2.12	3.75	.69	.75	1.38	1.05	1.84	1.69
CMC-XXX-5211-1-1/4-32	1-1/4	5	3.89	2.44	2.05	1.69	2.44	3.06	5.38	2.74	4.06	.69	.81	1.62	1.38	2.25	2.25
CMC-XXX-5211-1-1/2-32	1-1/2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.94	2.74	4.63	.69	.81	1.62	1.61	2.25	2.25
CMC-XXX-5211-2-32	2	7	3.89	2.44	2.05	1.69	2.44	3.06	6.50	2.74	5.19	.69	.81	1.62	1.77	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5211-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5211-1/2-16

└──SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

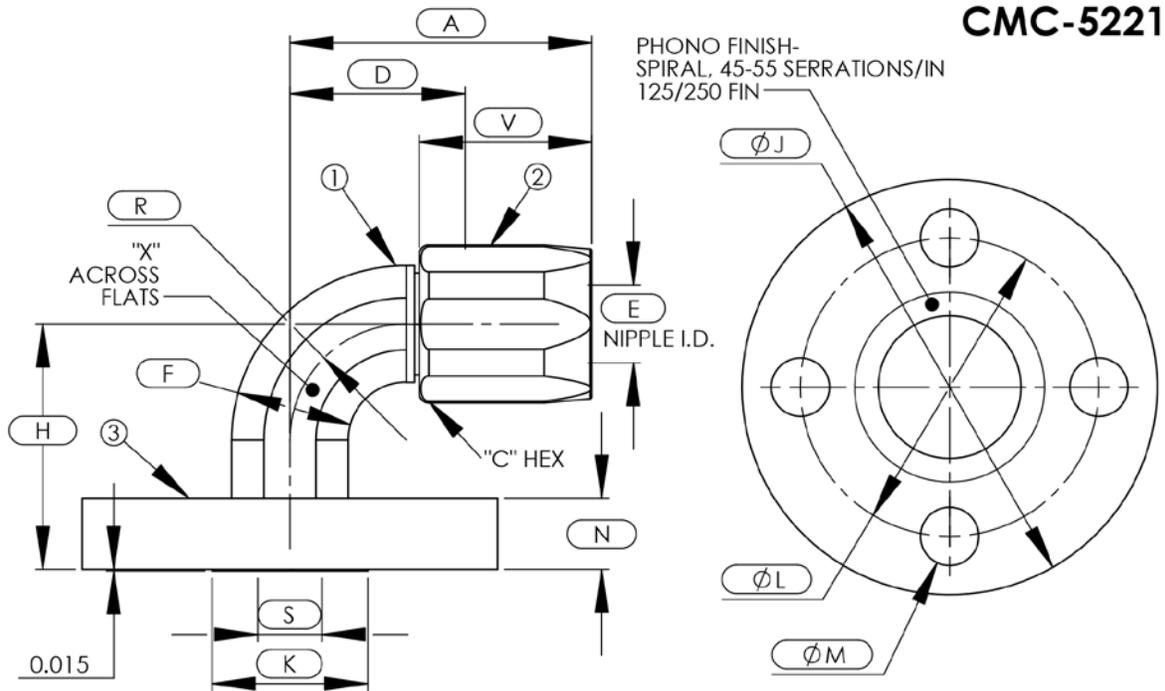
90° Elbow

Per MIL-H-24136/3 Type BII

QPL-24787-12

MIL-F-24787/1 Group VIII, Type FL

MIL-F-20042 150 Lb Flange (with 400 Lb Thick Flange)



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C	D	E	F	H	J	K	L	M	N	R	S	V	X
CMC-XXX-5221-1/2-16	1/2	3	2.80	1.44	1.53	0.75	1.25	2.38	3.56	1.50	2.44	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5221-3/4-16	3/4	4	2.80	1.44	1.53	0.75	1.25	2.38	3.81	1.50	2.69	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5221-1-16	1	4	2.80	1.44	1.53	0.75	1.25	2.38	4.25	1.50	3.13	.56	.75	1.12	0.71	1.16	1.19
CMC-XXX-5221-3/4-20	3/4	4	2.98	1.75	1.62	1.00	1.62	2.56	3.81	1.84	2.69	.56	.69	1.22	0.82	1.75	1.44
CMC-XXX-5221-1-24	1	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	2.12	3.13	.56	.75	1.38	1.05	1.84	1.69
CMC-XXX-5221-1-1/4-32	1-1/4	4	3.89	2.44	2.05	1.69	2.44	3.06	4.50	2.74	3.38	.56	.81	1.62	1.38	2.25	2.25
CMC-XXX-5221-1-1/2-32	1-1/2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.06	2.74	3.94	.56	.81	1.62	1.61	2.25	2.25
CMC-XXX-5221-2-32	2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.56	2.74	4.44	.56	.81	1.62	1.77	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5211-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

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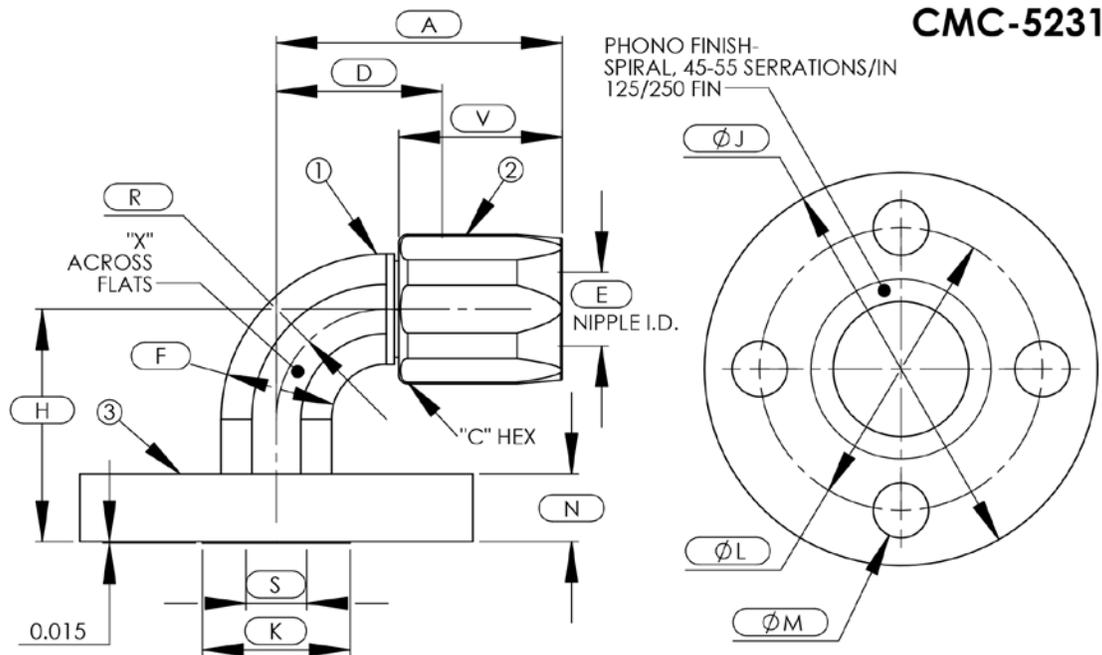
└── SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

Per MIL-H-24136/3 Type BIII
 MIL-F-24787/1 Group VIII, Type FL
 MIL-F-20042 250 Lb Flange

QPL-24787-12



ASSY PART NUMBER	NPS	NO. OF BOLTS	A	C	D	E	F	H	J	K	L	M	N	R	S	V	X
CMC-XXX-5231-1/2-16	1/2	3	2.80	1.44	1.53	0.75	1.25	2.38	3.56	1.50	2.44	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5231-3/4-16	3/4	4	2.80	1.44	1.53	0.75	1.25	2.38	3.81	1.50	2.69	.56	.69	1.12	0.71	1.66	1.19
CMC-XXX-5231-1-16	1	4	2.80	1.44	1.53	0.75	1.25	2.38	4.25	1.50	3.13	.56	.75	1.12	0.71	1.66	1.19
CMC-XXX-5231-3/4-20	3/4	4	2.98	1.75	1.62	1.00	1.62	2.56	3.81	1.84	2.69	.56	.69	1.22	0.82	1.75	1.44
CMC-XXX-5231-1-24	1	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	2.12	3.13	.56	.75	1.38	1.05	1.84	1.69
CMC-XXX-5231-1-1/4-32	1-1/4	4	3.89	2.44	2.05	1.69	2.44	3.06	4.50	2.74	3.38	.56	.81	1.62	1.38	2.25	2.25
CMC-XXX-5231-1-1/2-32	1-1/2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.06	2.74	3.94	.56	.81	1.62	1.61	2.25	2.25
CMC-XXX-5231-2-32	2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.56	2.74	4.44	.69	.81	1.62	1.77	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5211-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

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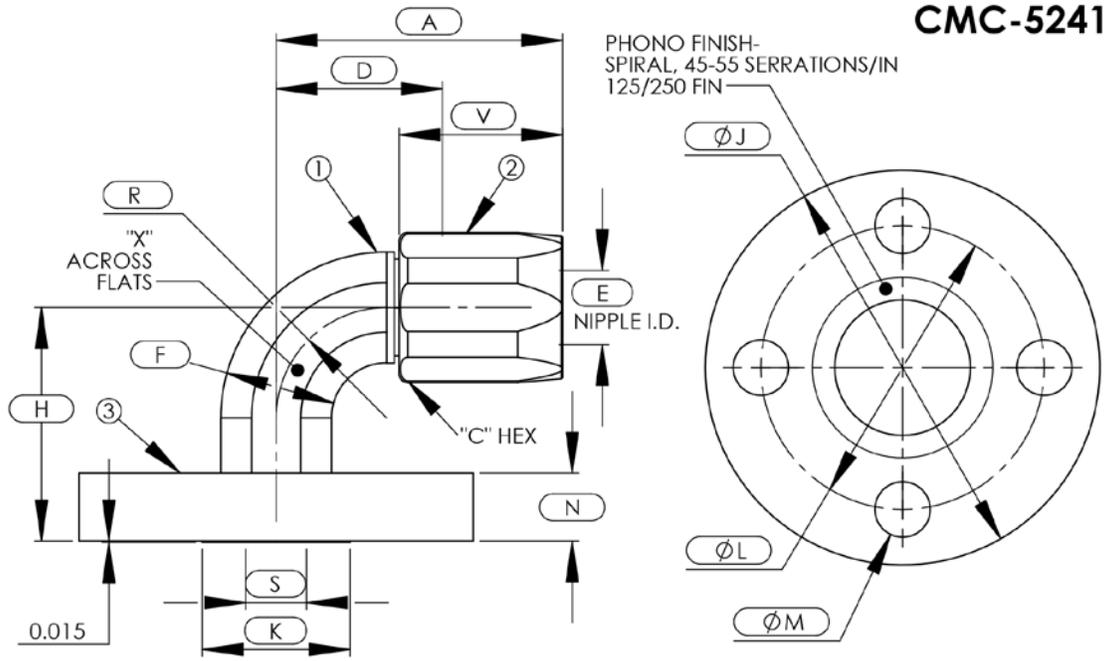
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

Per MIL-H-24136/3 Type BIV
 MIL-F-24787/1 Group VIII, Type FL
 MIL-F-20042 150 Lb Flange

QPL-24787-12



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C	D	E	F	H	J	K	L	M	N	R	S	V	X
CMC-XXX-5241-1/2-16	1/2	3	2.80	1.44	1.53	0.75	1.25	2.38	3.56	1.50	2.44	.56	.38	1.12	0.71	1.66	1.19
CMC-XXX-5241-3/4-16	3/4	4	2.80	1.44	1.53	0.75	1.25	2.38	3.81	1.50	2.69	.56	.44	1.12	0.71	1.66	1.19
CMC-XXX-5241-1-16	1	4	2.80	1.44	1.53	0.75	1.25	2.38	4.25	1.50	3.13	.56	.44	1.12	0.71	1.16	1.19
CMC-XXX-5241-3/4-20	3/4	4	2.98	1.75	1.62	1.00	1.62	2.56	3.81	1.84	2.69	.56	.44	1.22	0.82	1.75	1.44
CMC-XXX-5241-1-24	1	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	2.12	3.13	.56	.44	1.38	1.05	1.84	1.69
CMC-XXX-5241-1-1/4-32	1-1/4	4	3.89	2.44	2.05	1.69	2.44	3.06	4.50	2.74	3.38	.56	.44	1.62	1.38	2.25	2.25
CMC-XXX-5241-1-1/2-32	1-1/2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.06	2.74	3.94	.56	.44	1.62	1.61	2.25	2.25
CMC-XXX-5241-2-32	2	6	3.89	2.44	2.05	1.69	2.44	3.06	5.56	2.74	4.44	.56	.44	1.62	1.77	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5211-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5241-1/2-16

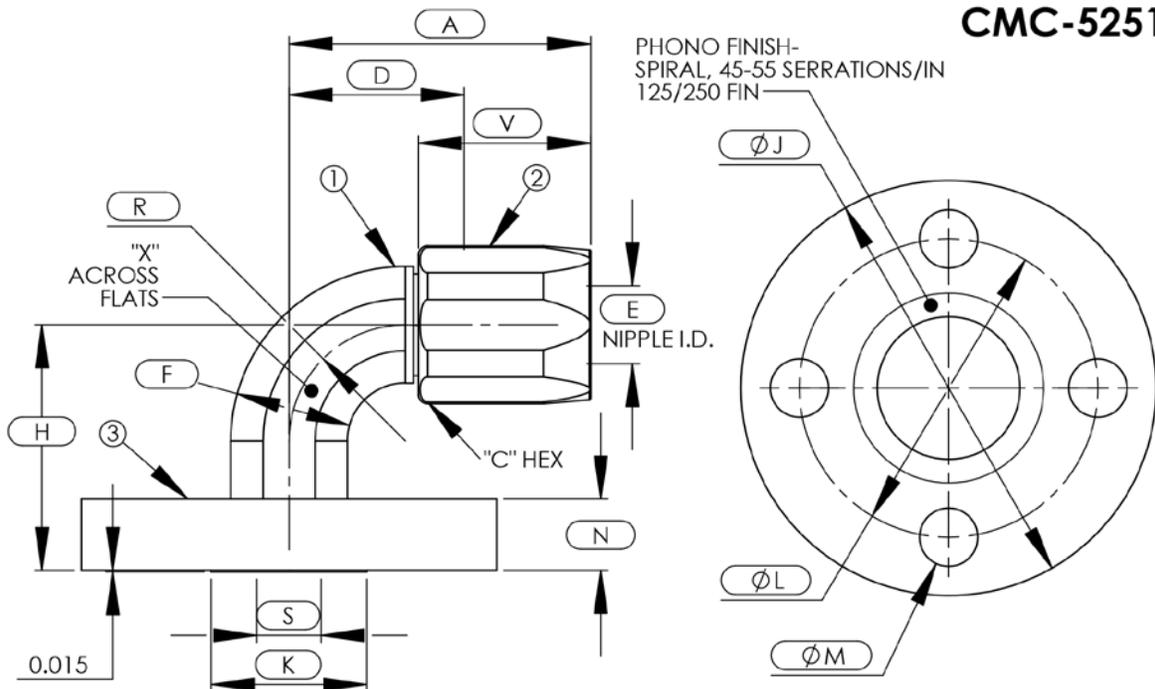
└── SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

Per MIL-H-24136/3 Type BV
 MIL-F-24787/1 Group VIII, Type FL
 ANSI B16.5 150 Lb Flange

QPL-24787-12



ASSY PART NUMBER	NPS SIZE	NO. OF BOLTS	A	C	D	E	F	H	J	K	L	M	N	R	S	V	X
CMC-XXX-5251-1/2-16	1/2	4	2.80	1.44	1.53	0.75	1.25	2.38	3.50	1.50	2.38	.62	.38	1.12	0.71	1.66	1.19
CMC-XXX-5251-3/4-16	3/4	4	2.80	1.44	1.53	0.75	1.25	2.38	3.88	1.50	2.75	.62	.44	1.12	0.71	1.66	1.19
CMC-XXX-5251-1-16	1	4	2.80	1.44	1.53	0.75	1.25	2.38	4.25	1.50	3.13	.62	.44	1.12	0.71	1.66	1.19
CMC-XXX-5251-3/4-20	3/4	4	2.98	1.75	1.62	1.00	1.62	2.56	3.88	1.84	2.75	.62	.44	1.22	0.92	1.75	1.44
CMC-XXX-5251-1-24	1	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	2.12	3.13	.62	.44	1.38	1.18	1.84	1.69
CMC-XXX-5251-1-1/4-32	1-1/4	4	3.89	2.44	2.05	1.69	2.44	3.06	4.62	2.74	3.50	.62	.44	1.62	1.53	2.25	2.25
CMC-XXX-5251-1-1/2-32	1-1/2	4	3.89	2.44	2.05	1.69	2.44	3.06	5.00	2.74	3.88	.62	.44	1.62	1.77	2.25	2.25
CMC-XXX-5251-2-32	2	4	3.89	2.44	2.05	1.69	2.44	3.06	6.00	2.74	4.75	.75	.44	1.62	1.77	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5211-(NPS SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(NPS SIZE)-(HOSE SIZE)-(TYPE)-(MATL CODE)

-EXAMPLE-

CMC-XXX-5251-1/2-16

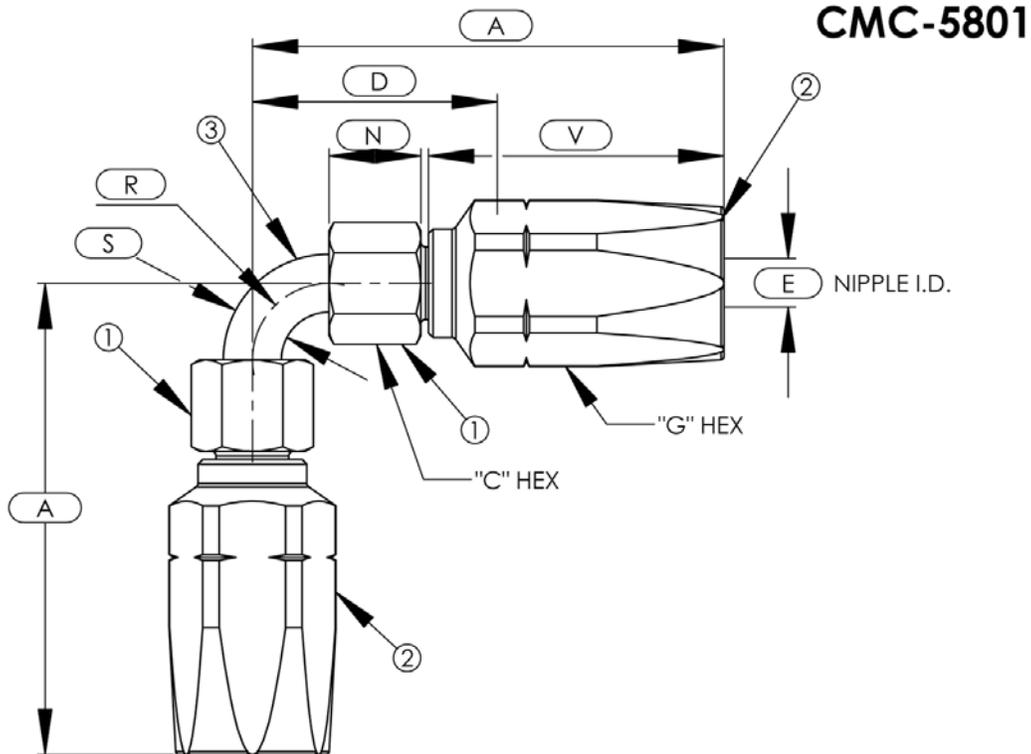
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Dogleg

For MIL-H-24136/3 Type E
MIL-F-24787/5 Group VIII, Type D

QPL-24787-12



ASSY PART NUMBER	HOSE SIZE	A	C	D	E	G	N	R	S	V
CMC-XX-5801-06-06	3/8	2.45	0.56	1.55	0.24	0.81	0.58	0.50	0.38	1.30
CMC-XX-5801-08-08	1/2	3.05	0.75	1.90	0.36	0.94	0.58	0.75	0.50	1.65
CMC-XX-5801-10-10	5/8	3.57	0.81	2.28	0.46	1.12	0.70	1.00	0.62	1.80
CMC-XX-5801-12-12	3/4	4.15	1.00	2.58	0.55	1.24	0.74	1.25	0.75	2.10
CMC-XX-5801-16-16	1	3.93	1.38	2.66	0.82	1.44	0.70	1.50	1.00	1.66
CMC-XX-5801-20-20	1-1/4	4.27	1.62	2.91	1.05	1.75	0.70	1.75	1.25	1.75
CMC-XX-5801-24-24	1-1/2	4.65	1.81	3.19	1.28	1.94	0.74	2.00	1.50	1.84
CMC-XX-5801-32-32	2	5.68	2.38	3.84	1.69	2.44	0.86	2.50	2.00	2.25

- B.O.M. COMPONENT PART NUMBERS
- ① ALL SIZES-.....NI-5001-((HOSE SIZE)-(MATL CODE))
 - ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
 - ③ MONEL- SIZES 6 THRU 12.....TUBE
 - ③ COPPER NICKEL-SIZES 16 THRU 32...TUBE

-EXAMPLE-

CMC-XX-5801-06-06

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

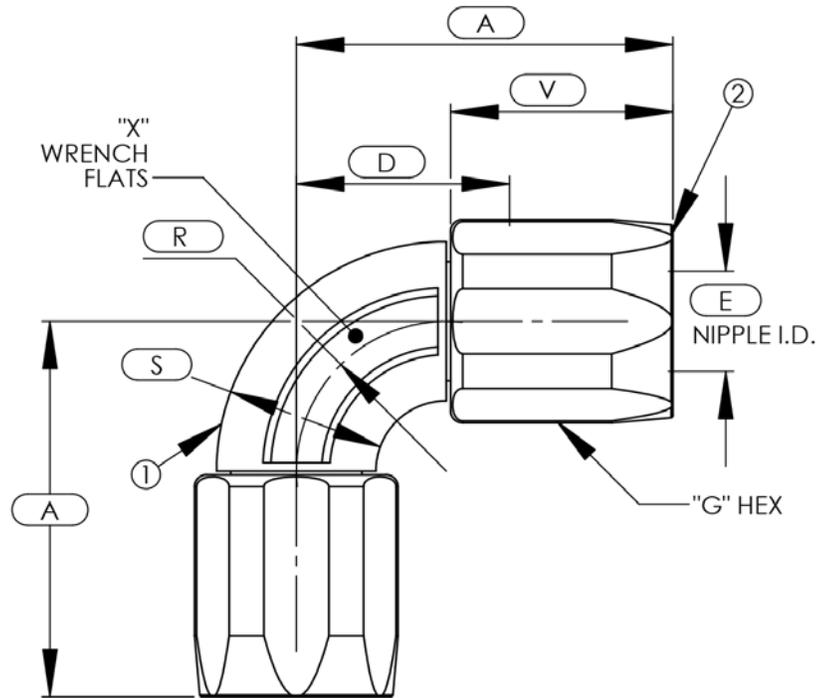
CMC® Hose End Fittings

90° Dogleg

For MIL-H-24136/3 Style E
MIL-F-24787/5 Group VIII, Type D

QPL-24787-12

CMC-5311



ASSY PART NUMBER	HOSE SIZE	A	D	E	G	R	S	V	X
CMC-XX-5311-16-16	1	2.80	1.53	0.75	1.44	1.12	1.25	1.66	1.19
CMC-XX-5311-20-20	1-1/4	2.98	1.62	1.00	1.75	1.22	1.62	1.75	1.44
CMC-XX-5311-24-24	1-1/2	3.24	1.78	1.16	1.94	1.38	1.81	1.84	1.69
CMC-XX-5311-32-32	2	3.89	2.05	1.69	2.44	1.62	2.44	2.25	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5311-(HOSE SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

-EXAMPLE-

CMC-XX-5311-16-16

└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

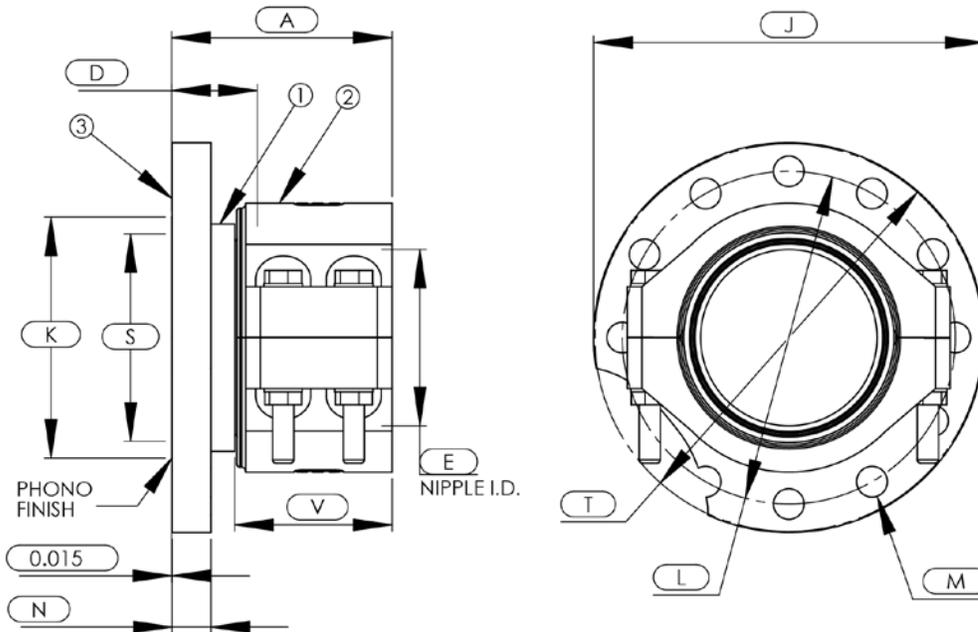
CMC® Hose End Fittings

Straight Nipple

MIL-F-24787/1 Group X, Type F (Sz 40-64)
 MIL-F-24787/1 Group IX, Type F (Sz 80-96)
 Class I Flange

QPL-24787-12

CMC-5110



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	J	K	L	M	N	S	T	V
CMC-X-5110-40-40	2-1/2	8	4.58	1.95	2.05	7.56	3.27	6.00	0.81	0.94	2.71	7.65	2.95
CMC-X-5110-48-48	3	8	5.01	1.95	2.51	8.13	4.50	6.56	0.81	0.94	3.31	7.65	3.50
CMC-X-5110-64-64	4	9	5.46	2.36	3.50	9.25	5.22	7.69	0.81	1.00	4.25	8.91	3.53
CMC-X-5110-80-80	5	11	6.74	2.62	4.40	10.38	6.37	8.81	0.81	1.06	5.31	11.42	4.75
CMC-X-5110-96-96	6	12	6.74	2.62	5.40	11.94	7.38	10.19	0.94	1.19	6.35	11.87	4.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5110-40-40

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

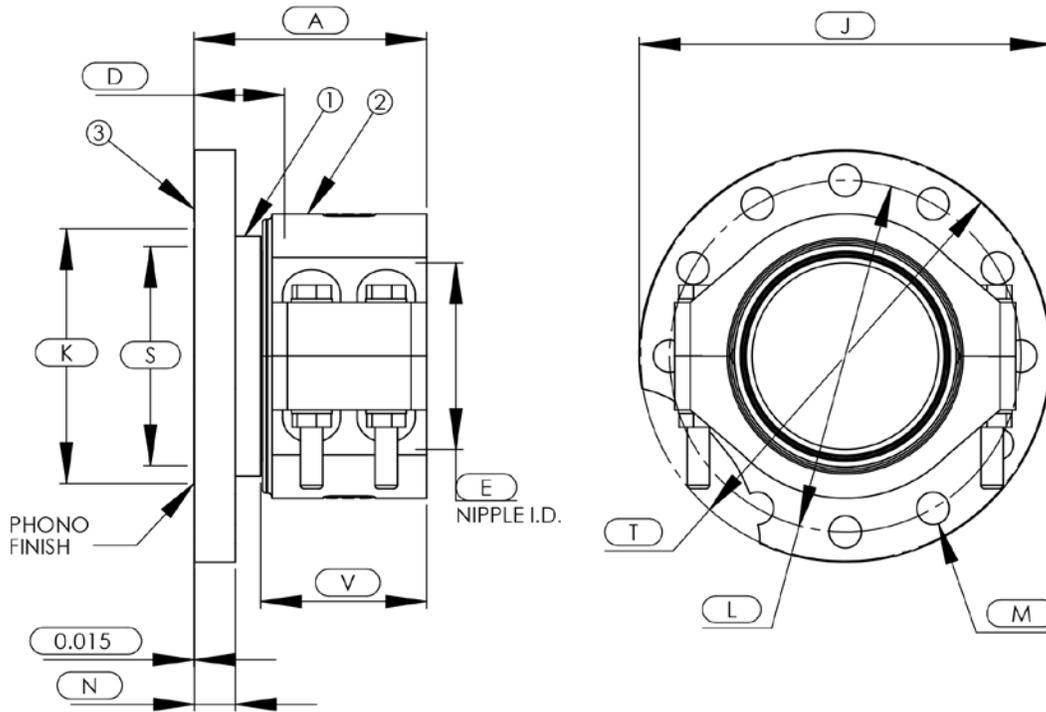
CMC® Hose End Fittings

Straight Nipple

MIL-F-24787/1 Group X, Type F (Sz 40-64)
 MIL-F-24787/1 Group IX, Type F (Sz 80-96)
 Class II Flange

QPL-24787-12

CMC-5120



PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	J	K	L	M	N	S	T	V
CMC-X-5120-40-40	2-1/2	6	4.58	1.95	2.05	6.13	3.27	5.00	0.56	0.94	2.71	7.65	2.95
CMC-X-5120-48-48	3	8	5.01	1.95	2.51	6.63	4.50	5.50	0.56	0.94	3.31	7.65	3.50
CMC-X-5120-64-64	4	8	5.46	2.36	3.50	7.69	5.22	6.56	0.56	1.00	4.25	8.91	3.53
CMC-X-5120-80-80	5	10	6.74	2.62	4.40	9.06	6.37	7.81	0.69	1.06	5.31	11.42	4.75
CMC-X-5120-96-96	6	12	6.74	2.62	5.40	10.13	7.38	8.88	0.69	1.19	6.35	11.87	4.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5120-40-40

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

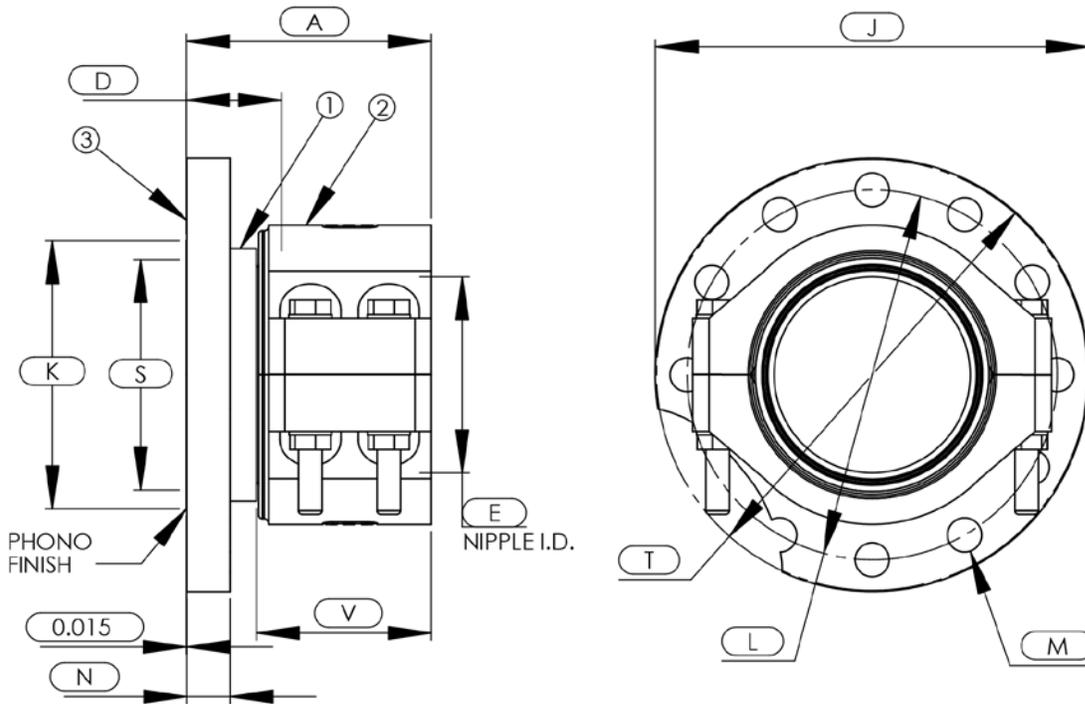
CMC® Hose End Fittings

Straight Nipple

MIL-F-24787/1 Group X, Type F (Sz 40-64)
 MIL-F-24787/1 Group IX, Type F (Sz 80-96)
 Class III Flange

QPL-24787-12

CMC-5130



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	J	K	L	M	N	S	T	V
CMC-X-5130-40-40	2-1/2	6	4.58	1.95	2.05	6.13	3.27	5.00	0.69	0.94	2.71	7.65	2.95
CMC-X-5130-48-48	3	8	5.01	1.95	2.51	6.63	4.50	5.50	0.69	0.94	3.31	7.65	3.50
CMC-X-5130-64-64	4	8	5.46	2.36	3.50	7.69	5.22	6.56	0.69	1.00	4.25	8.91	3.53
CMC-X-5130-80-80	5	10	6.74	2.62	4.40	9.06	6.37	7.81	0.69	1.06	5.31	11.42	4.75
CMC-X-5130-96-96	6	12	6.74	2.62	5.40	10.13	7.38	8.88	0.69	1.19	6.35	11.87	4.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5130-40-40

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

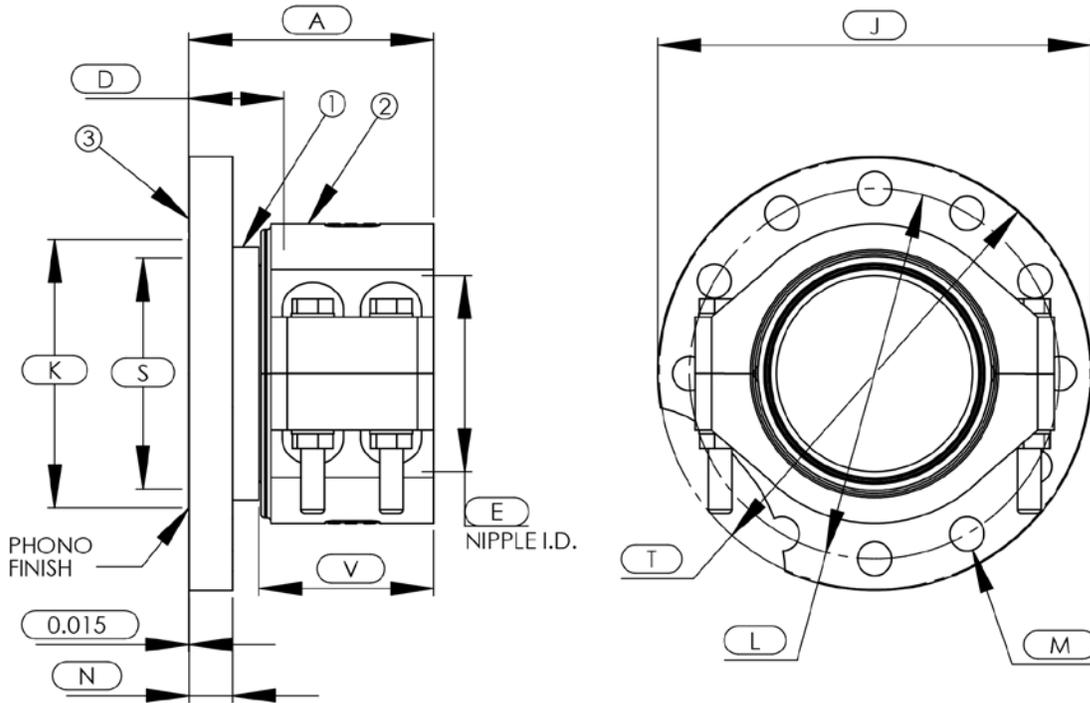
CMC® Hose End Fittings

Straight Nipple

MIL-F-24787/1 Group X, Type F (Sz 40-64)
 MIL-F-24787/1 Group IX, Type F (Sz 80-96)
 Class IV Flange

QPL-24787-12

CMC-5140



PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	J	K	L	M	N	S	T	V
CMC-X-5140-40-40	2-1/2	6	4.58	1.95	2.05	6.13	3.27	5.00	0.56	0.50	2.71	7.65	2.95
CMC-X-5140-48-48	3	8	5.01	1.95	2.51	6.63	4.50	5.50	0.56	0.50	3.31	7.65	3.50
CMC-X-5140-64-64	4	8	5.46	2.36	3.50	7.69	5.22	6.56	0.56	0.50	4.25	8.91	3.53
CMC-X-5140-80-80	5	10	6.74	2.62	4.40	9.06	6.37	7.81	0.69	0.56	5.31	11.42	4.75
CMC-X-5140-96-96	6	12	6.74	2.62	5.40	10.13	7.38	8.88	0.69	0.56	6.35	11.87	4.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5140-40-40

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

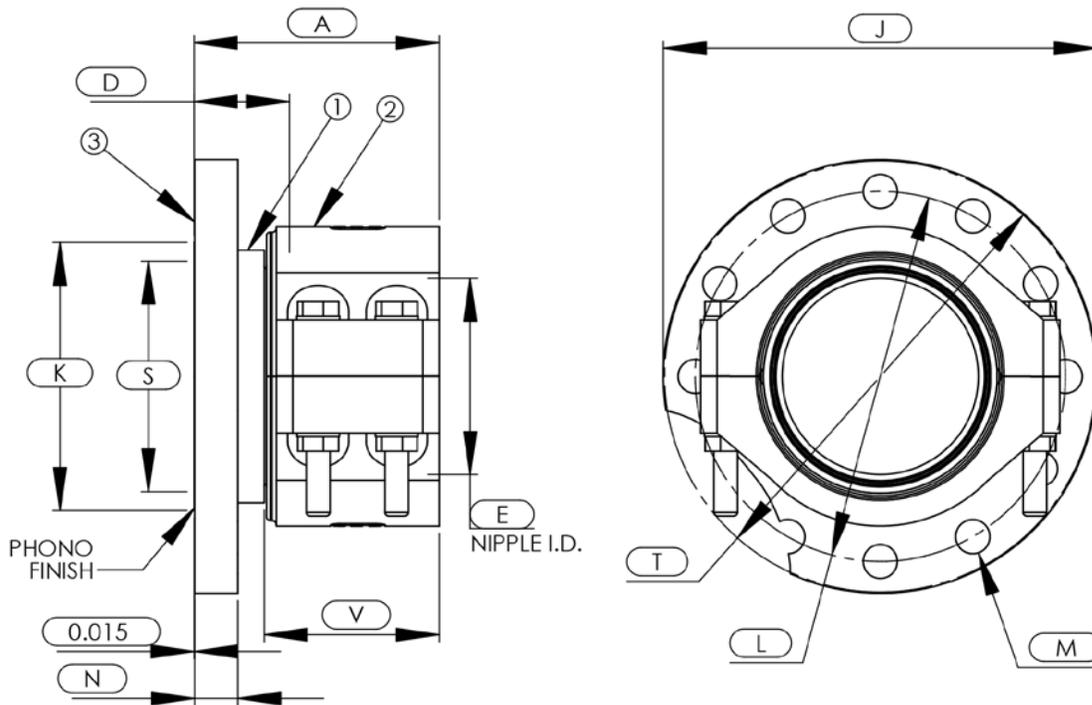
CMC® Hose End Fittings

Straight Nipple

MIL-F-24787/1 Group X, Type F (Sz 40-64)
 MIL-F-24787/1 Group IX, Type F (Sz 80-96)
 Class V Flange

QPL-24787-12

CMC-5150



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	J	K	L	M	N	S	T	V
CMC-X-5150-40-40	2-1/2	6	4.58	1.95	2.05	7.00	3.27	5.50	0.75	0.48	2.71	7.65	2.95
CMC-X-5150-48-48	3	8	5.01	1.95	2.51	7.50	4.50	6.00	0.75	0.48	3.31	7.65	3.50
CMC-X-5150-64-64	4	8	5.46	2.36	3.50	9.00	5.22	7.50	0.75	0.48	4.25	8.91	3.53
CMC-X-5150-80-80	5	8	6.74	2.62	4.40	10.00	6.37	8.50	0.88	1.05	5.31	11.42	4.75
CMC-X-5150-96-96	6	8	6.74	2.62	5.40	11.00	7.38	9.50	0.88	1.17	6.35	11.87	4.70

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5100-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5150-40-40

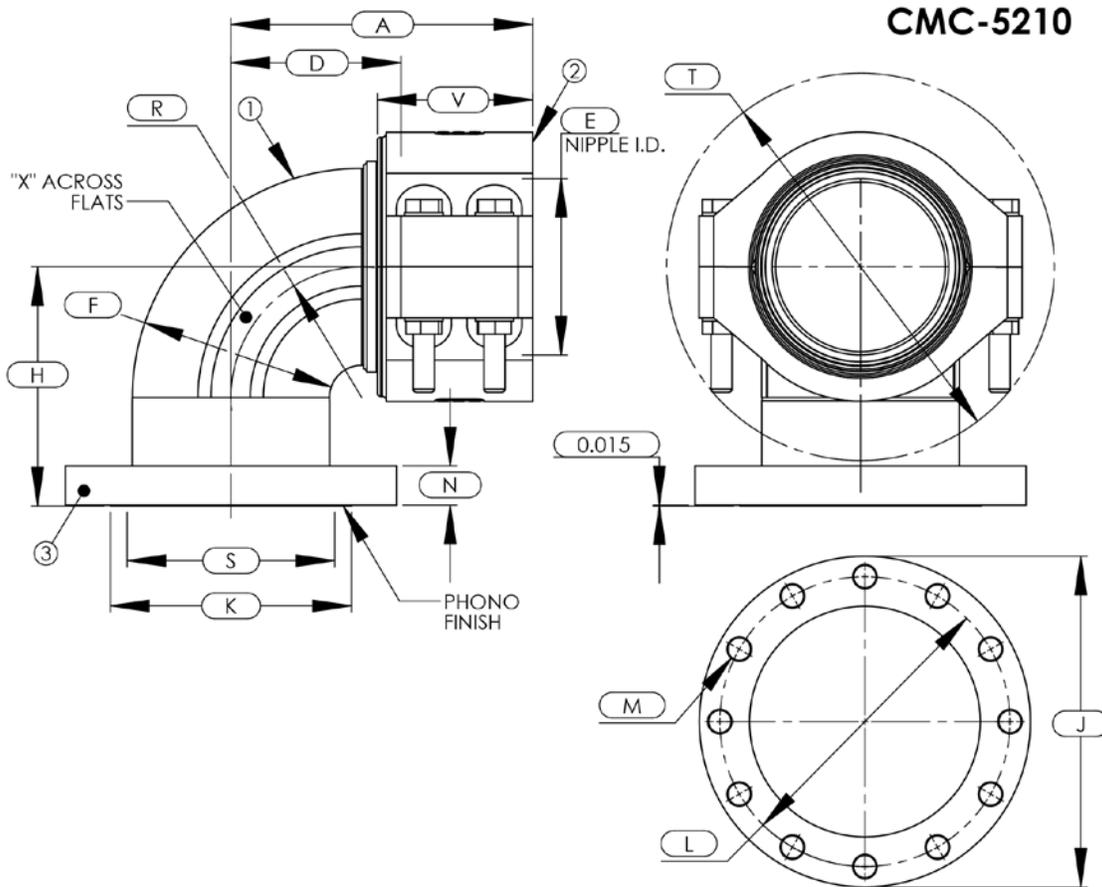
└──SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

MIL-F-24787/1 Group X, Type FL (Sz 48-64)
 MIL-F-24787/1 Group IX, Type FL (Sz 80-96)
 Class I Flange

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	F MAX	H	J	K	L	M	N	R	S	T	V	X
CMC-X-5210-48-48	3	8	5.81	3.05	2.51	3.38	4.60	8.13	4.55	6.56	0.81	0.94	2.10	3.31	7.65	3.50	3.48
CMC-X-5210-64-64	4	9	6.48	3.94	3.50	4.20	5.62	9.25	5.27	7.69	0.81	1.00	2.81	4.28	8.91	3.53	4.20
CMC-X-5210-80-80	5	11	8.70	4.59	4.40	5.15	6.82	10.38	6.35	8.81	0.81	1.06	3.50	5.32	11.42	4.75	5.15
CMC-X-5210-96-96	6	12	9.23	5.20	5.40	6.03	7.33	11.94	7.37	10.19	0.94	1.19	4.00	6.35	11.87	4.70	6.03

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5200-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5200-48-48

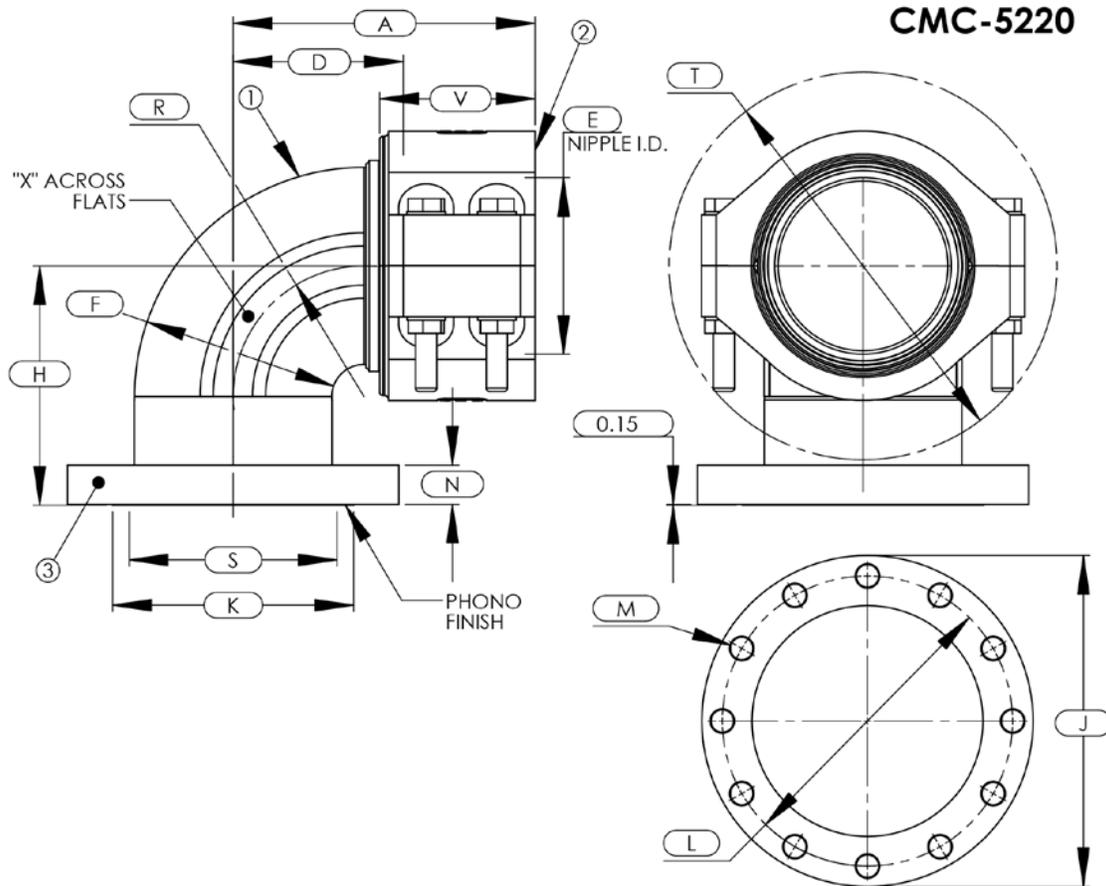
SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

MIL-F-24787/1 Group X, Type FL (Sz 48-64)
 MIL-F-24787/1 Group IX, Type FL (Sz 80-96)
 Class II Flange

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	F MAX	H	J	K	L	M	N	R	S	T	V	X
CMC-X-5220-48-48	3	8	5.81	3.05	2.51	3.38	4.60	6.63	4.55	5.50	0.56	0.94	2.10	3.31	7.65	3.50	3.48
CMC-X-5220-64-64	4	8	6.48	3.94	3.50	4.20	5.62	7.69	5.27	6.56	0.56	1.00	2.81	4.28	8.91	4.53	4.20
CMC-X-5220-80-80	5	10	8.70	4.59	4.40	5.15	6.82	9.06	6.35	7.81	0.69	1.06	3.50	5.32	11.42	4.75	5.15
CMC-X-5220-96-96	6	12	9.23	5.20	5.40	6.03	7.33	10.13	7.37	8.88	0.69	1.19	4.00	6.35	11.87	4.70	6.03

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5200-(SIZE)-(MATL CODE)
- ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5220-48-48

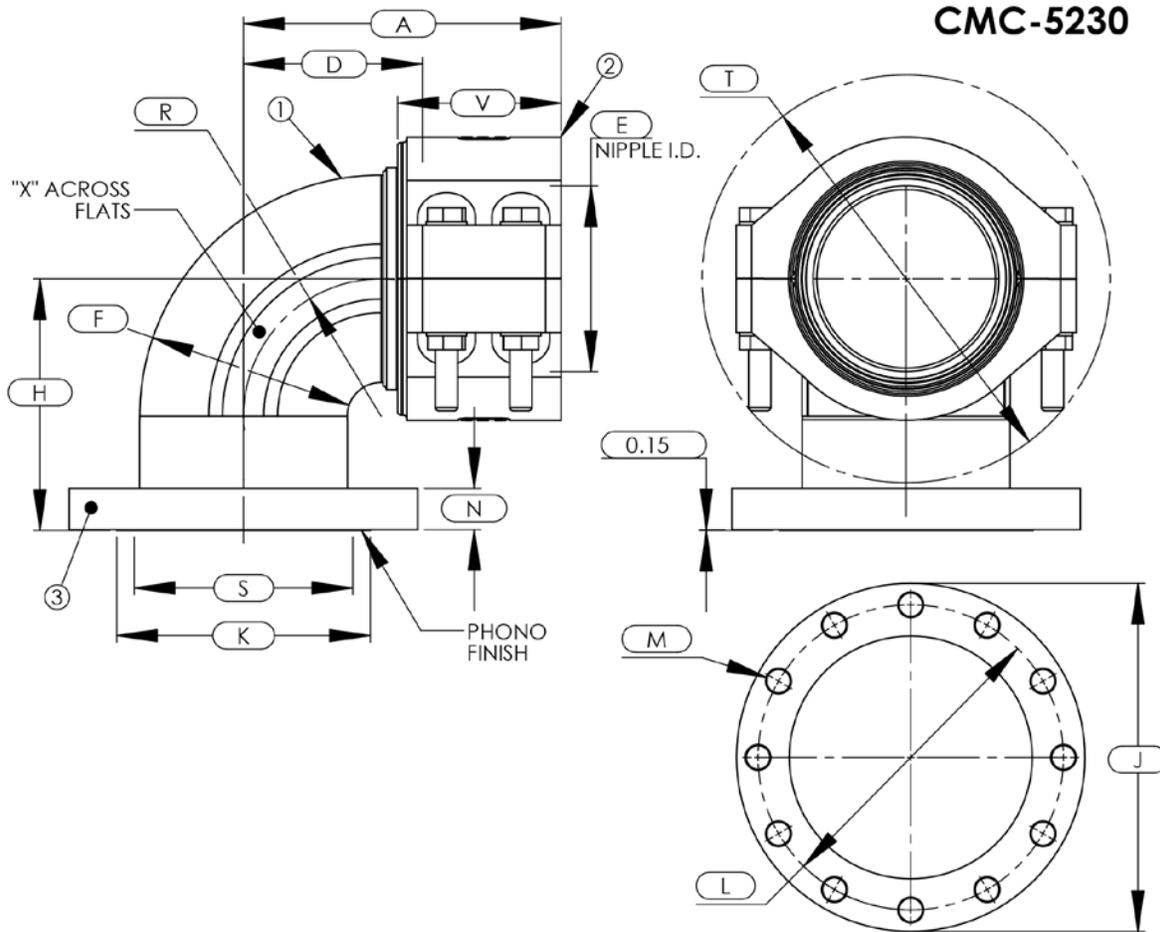
└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

MIL-F-24787/1 Group X, Type FL (Sz 48-64)
 MIL-F-24787/1 Group IX, Type FL (Sz 80-96)
 Class III Flange

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	COMPONENT PART NUMBERS															
			A	D	E	F	H	J	K	L	M	N	R	S	T	V	X	
CMC-X-5230-48-48	3	8	5.81	3.05	2.51	3.38	4.60	6.63	4.55	5.50	0.69	0.94	2.10	3.31	7.65	3.50	3.48	
CMC-X-5230-64-64	4	8	6.48	3.94	3.50	4.20	5.62	7.69	5.27	6.56	0.69	1.00	2.81	4.28	8.91	3.53	4.20	
CMC-X-5230-80-80	5	10	8.70	4.59	4.40	5.15	6.82	9.06	6.35	7.81	0.69	1.06	3.50	5.32	11.42	4.75	5.15	
CMC-X-5230-96-96	6	12	9.23	5.20	5.40	6.03	7.33	10.13	7.37	8.88	0.69	1.19	4.00	6.35	11.87	4.70	6.03	

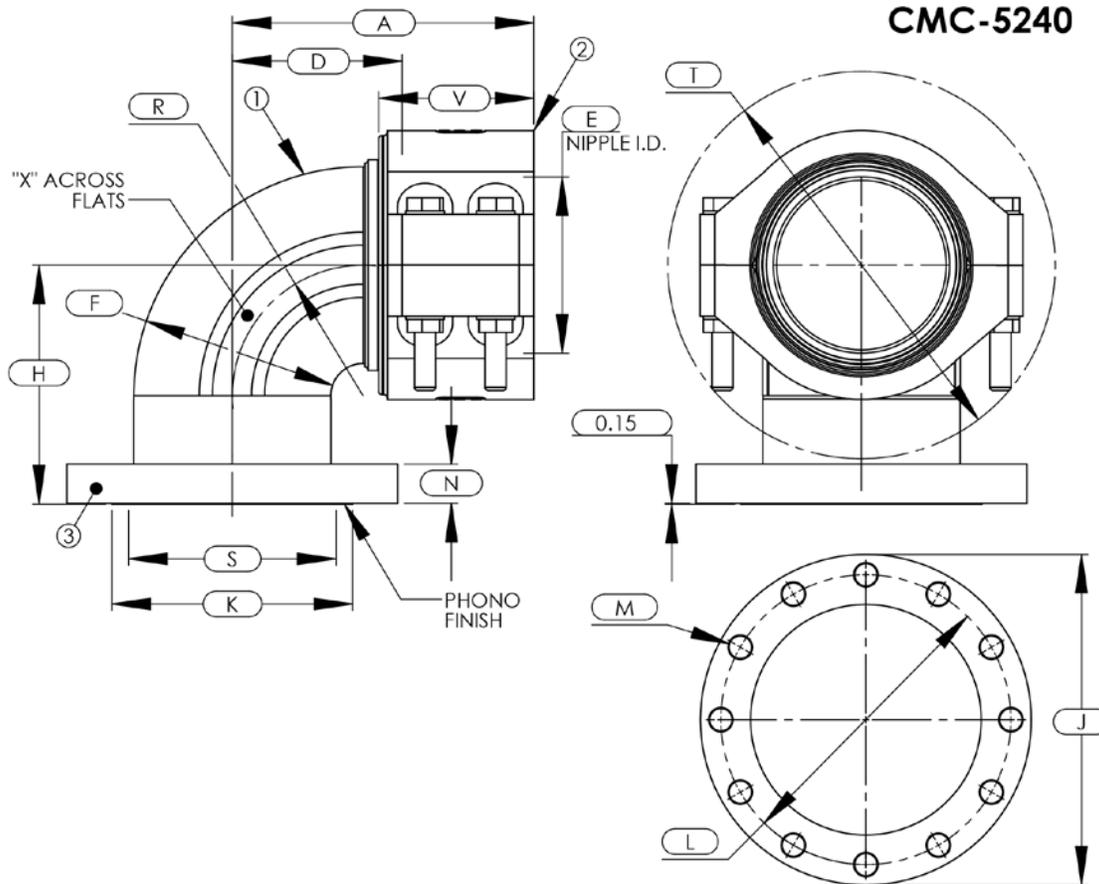
B.O.M. COMPONENT PART NUMBERS
 ① ALL SIZES-----NI-5200-(SIZE)-(MATL CODE)
 ② ALL SIZES-----HC-(SIZE)-(MATL CODE)
 ③ ALL SIZES-----FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)
 -EXAMPLE-
 CMC-X-5230-48-48
 SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

MIL-F-24787/1 Group X, Type FL (Sz 48-64)
 MIL-F-24787/1 Group IX, Type FL (Sz 80-96) Class
 IV Flange

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	F MAX	H	J	K	L	M	N	R	S	T	V	X
CMC-X-5240-48-48	3	8	5.81	3.05	2.51	3.38	4.60	6.63	4.55	5.50	0.56	0.50	2.10	3.31	7.65	3.50	3.48
CMC-X-5240-64-64	4	8	6.48	3.94	3.50	4.20	5.62	7.69	5.27	6.56	0.56	0.50	2.81	4.28	8.91	3.53	4.20
CMC-X-5240-80-80	5	10	8.70	4.59	4.40	5.15	6.82	9.06	6.35	7.81	0.69	0.56	3.50	5.32	11.42	4.75	5.15
CMC-X-5240-96-96	6	12	9.23	5.20	5.40	6.03	7.33	10.13	7.37	8.88	0.69	0.56	4.00	6.35	11.87	4.70	6.03

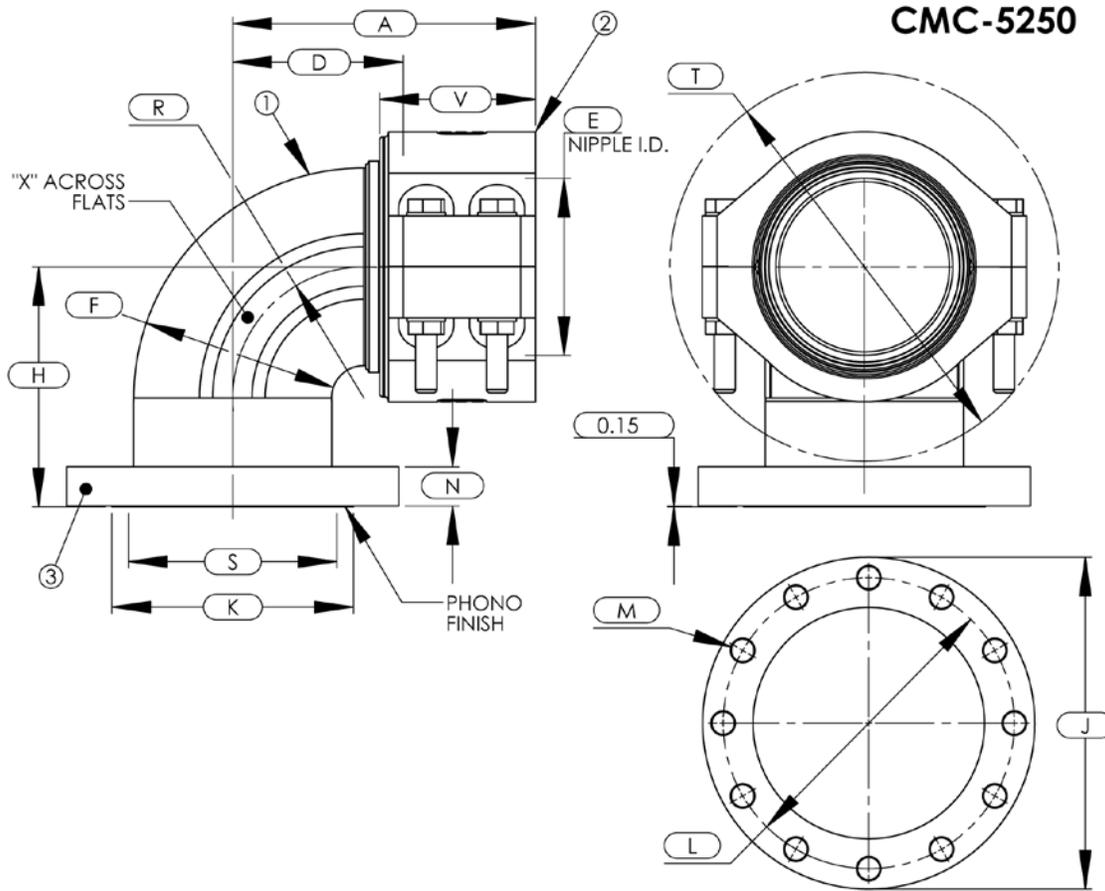
B.O.M. COMPONENT PART NUMBERS
 ① ALL SIZES-.....NI-5200-(SIZE)-(MATL CODE)
 ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
 ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)
 -EXAMPLE-
 CMC-X-5240-48-48
 └─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

90° Elbow

MIL-F-24787/1 Group X, Type FL (Sz 48-64)
 MIL-F-24787/1 Group IX, Type FL (Sz 80-96)
 Class V Flange

QPL-24787-12



ASSY PART NUMBER	IPS SIZE	BOLT HOLE QTY	A	D	E	F MAX	H	J	K	L	M	N	R	S	T	V	X
CMC-X-5250-48-48	3	4	5.65	2.90	2.51	3.38	4.45	7.50	4.50	6.00	0.75	0.48	2.10	3.31	7.65	3.50	3.38
CMC-X-5250-64-64	4	8	6.48	3.94	3.50	4.20	5.62	9.00	5.27	7.50	0.75	0.48	2.81	4.28	8.91	3.86	4.20
CMC-X-5250-80-80	5	8	8.64	4.59	4.40	5.15	6.82	10.00	6.35	8.50	0.88	1.05	3.50	5.32	11.42	4.75	5.15
CMC-X-5250-96-96	6	8	9.14	5.20	5.40	6.03	7.33	11.00	7.37	9.50	0.88	1.17	4.00	6.35	11.96	4.70	6.03

- B.O.M. COMPONENT PART NUMBERS
 ① ALL SIZES-.....NI-5200-(SIZE)-(MATL CODE)
 ② ALL SIZES-.....HC-(SIZE)-(MATL CODE)
 ③ ALL SIZES-.....FL-(HOSE SIZE)-(IPS SIZE)-(CLASS)-(MATL CODE)

-EXAMPLE-

CMC-X-5250-48-48

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

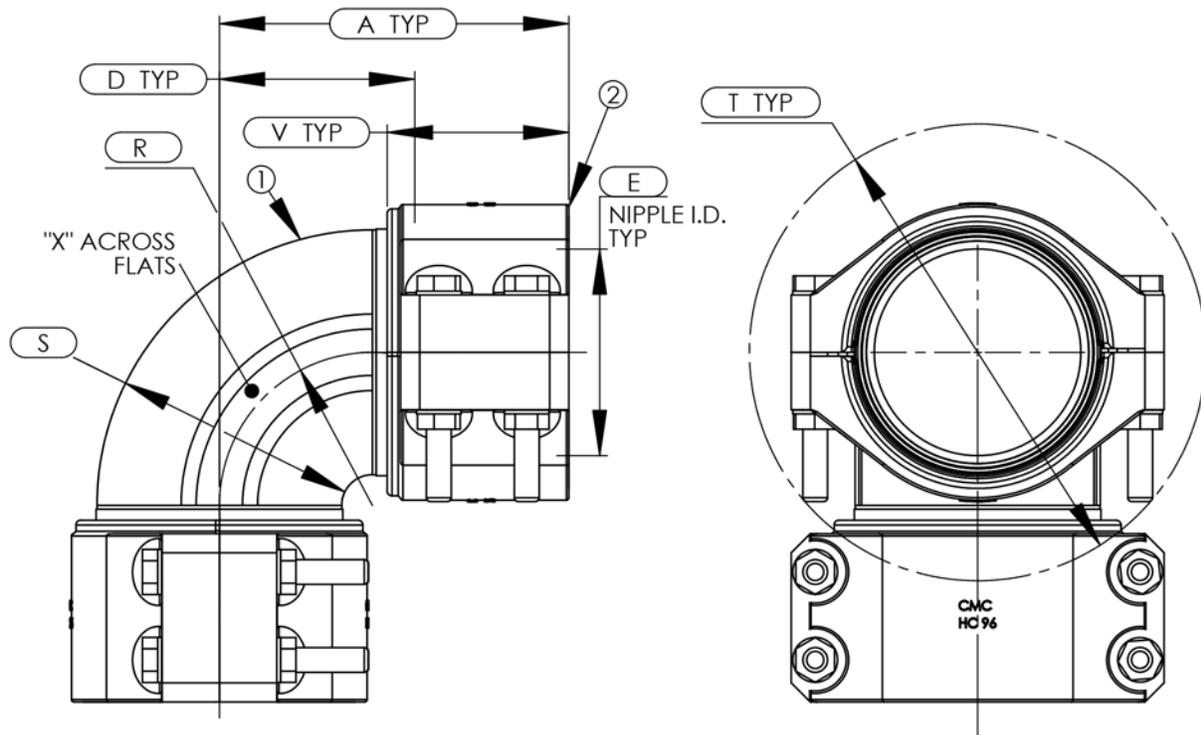
90° Dogleg

MIL-F-24787/5 Group X, Type D (Sz 48-64)

QPL-24787-12

MIL-F-24787/5 Group IX, Type D (Sz 80-96)

CMC-5300



ASSY PART NUMBER	IPS SIZE	A	D	E	R	S MAX	T	V	X
CMC-X-5300-48-48	3	5.65	2.80	2.51	2.10	3.48	7.65	3.50	3.38
CMC-X-5300-64-64	4	7.00	4.15	3.50	3.02	4.75	8.91	3.53	4.20
CMC-X-5300-80-80	5	8.64	4.52	4.40	3.50	5.15	11.42	4.75	5.16
CMC-X-5300-96-96	6	9.14	5.00	5.40	4.00	6.40	11.87	4.70	6.03

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5300-(SIZE)-(MATL CODE)

② ALL SIZES-.....HC-(SIZE)-(MATL CODE)

-EXAMPLE-

CMC-X-5300-48-48

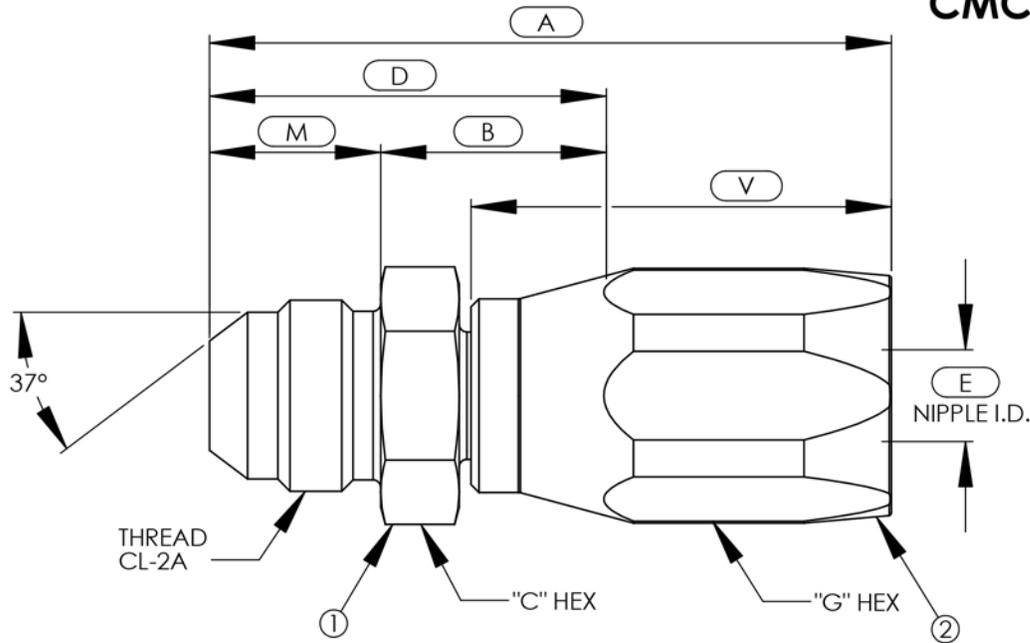
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Male JIC Flare

For SAE 100R5 Hose

CMC-5301



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	V
CMC-XX-5301-04-04	4	7/16-20	1.85	0.55	0.56	1.10	0.13	0.62	0.55	1.10
CMC-XX-5301-05-05	5	1/2-20	1.95	0.62	0.62	1.17	0.17	0.69	0.55	1.20
CMC-XX-5301-06-06	6	9/16-18	2.12	0.66	0.69	1.22	0.24	0.81	0.56	1.30
CMC-XX-5301-08-08	8	3/4-16	2.57	0.76	0.88	1.42	0.36	0.94	0.66	1.65
CMC-XX-5301-10-10	10	7/8-14	2.88	0.84	1.00	1.60	0.46	1.12	0.76	1.80
CMC-XX-5301-12-12	12	1-1/16-12	3.35	0.92	1.25	1.78	0.55	1.25	0.86	2.10
CMC-XX-5301-16-16	16	1-5/16-12	2.96	0.78	1.50	1.69	0.82	1.44	0.91	1.66
CMC-XX-5301-20-20	20	1-5/8-12	3.22	0.90	1.75	1.86	1.05	1.75	0.96	1.75
CMC-XX-5301-24-24	24	1-7/8-12	3.44	0.91	2.00	1.99	1.28	1.94	1.08	1.84
CMC-XX-5301-32-32	32	2-1/2-12	4.22	1.05	2.62	2.38	1.75	2.50	1.33	2.25

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5301-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

-EXAMPLE-

CMC-XX-5301-04-04

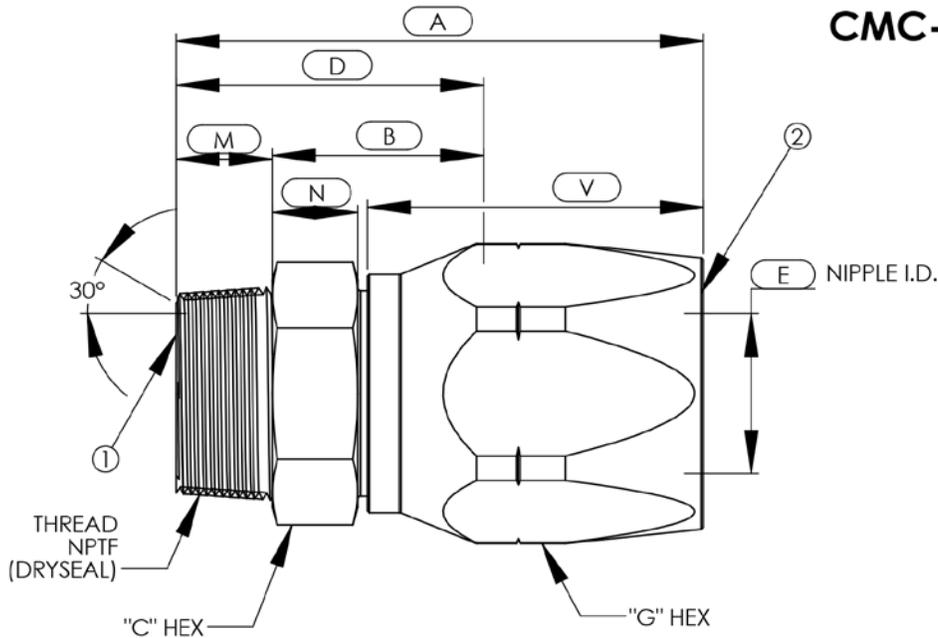
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

Male Pipe Thread

For SAE 100R5 Hose

CMC-5401



ASSY PART NUMBER	HOSE SIZE	NPT THREAD	A	B	C	D	E	G	M	N	V
CMC-XX-5401-1/8-04	4	1/8-27	1.68	0.54	0.44	0.93	0.17	0.62	0.38	0.19	1.10
CMC-XX-5401-1/4-04	4	1/4-18	1.87	0.54	0.56	1.12	0.17	0.62	0.56	0.19	1.10
CMC-XX-5401-1/4-05	5	1/4-18	1.96	0.62	0.56	1.18	0.17	0.69	0.56	0.19	1.20
CMC-XX-5401-1/4-06	6	1/4-18	2.13	0.67	0.56	1.23	0.24	0.81	0.56	0.25	1.30
CMC-XX-5401-3/8-06	6	3/8-18	2.13	0.54	0.75	1.23	0.24	0.81	0.56	0.25	1.30
CMC-XX-5401-1/4-08	8	1/4-18	2.48	0.77	0.56	1.33	0.30	0.94	0.56	0.25	1.65
CMC-XX-5401-3/8-08	8	3/8-18	2.48	0.77	0.75	1.33	0.36	0.94	0.56	0.25	1.65
CMC-XX-5401-1/2-08	8	1/2-14	2.73	0.84	0.88	1.58	0.36	0.94	0.75	0.31	1.65
CMC-XX-5401-1/2-10	10	1/2-14	2.88	0.84	0.88	1.59	0.46	1.12	0.75	0.31	1.80
CMC-XX-5401-1/2-12	12	1/2-14	3.24	0.92	0.88	1.68	0.49	1.25	0.75	0.38	2.10
CMC-XX-5401-3/4-12	12	3/4-14	3.24	0.92	1.06	1.67	0.55	1.25	0.75	0.38	2.10

B.O.M.

COMPONENT PART NUMBERS

① ALL SIZES-.....NI-5401-(NPT SIZE)-(HOSE SIZE)-(MATL CODE)

② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)

-EXAMPLE-

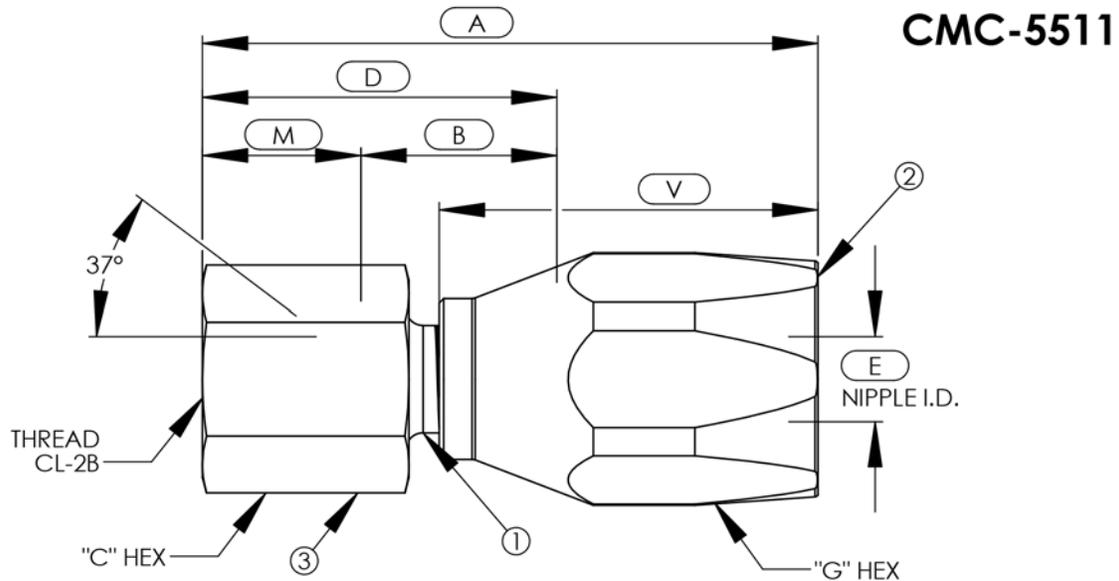
CMC-XX-5401-1/8-04

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

37° Flare Female Swivel (No Hex) QPL-24787-12

For SAE 100R5 Hose
Per MIL-H-24136/3 Type G
MIL-F-24787/2 Group VIII, Type A



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	G	M	V
CMC-XX-5511-04-04	4	7/16-20	1.75	0.65	0.56	1.00	0.17	0.62	0.35	1.10
CMC-XX-5511-05-05	5	1/2-20	1.90	0.74	0.62	1.12	0.23	0.69	0.38	1.20
CMC-XX-5511-06-06	6	9/16-18	2.05	0.77	0.69	1.15	0.30	0.81	0.38	1.30
CMC-XX-5511-08-08	8	3/4-16	2.52	0.95	0.88	1.38	0.39	0.94	0.43	1.65
CMC-XX-5511-10-10	10	7/8-14	2.80	1.00	1.00	1.51	0.48	1.12	0.51	1.80
CMC-XX-5511-12-12	12	1-1/16-12	3.15	1.01	1.25	1.58	0.61	1.25	0.57	2.10
CMC-XX-5511-16-16	16	1-5/16-12	2.82	0.95	1.50	1.55	0.82	1.44	0.60	1.66
CMC-XX-5511-20-20	20	1-5/8-12	3.00	1.00	2.00	1.64	1.05	1.75	0.64	1.75
CMC-XX-5511-24-24	24	1-7/8-12	3.28	1.09	2.25	1.83	1.28	1.94	0.74	1.84
CMC-XX-5511-32-32	32	2-1/2-12	3.88	1.27	2.88	2.03	1.75	2.44	0.76	2.25

- B.O.M. COMPONENT PART NUMBERS
 ① ALL SIZES-.....NI-5511-(SIZE)-(HOSE SIZE)-(MATL CODE)
 ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
 ③ ALL SIZES-.....SWIVEL NUT-(TUBE SIZE)-(MATL CODE)

-EXAMPLE-

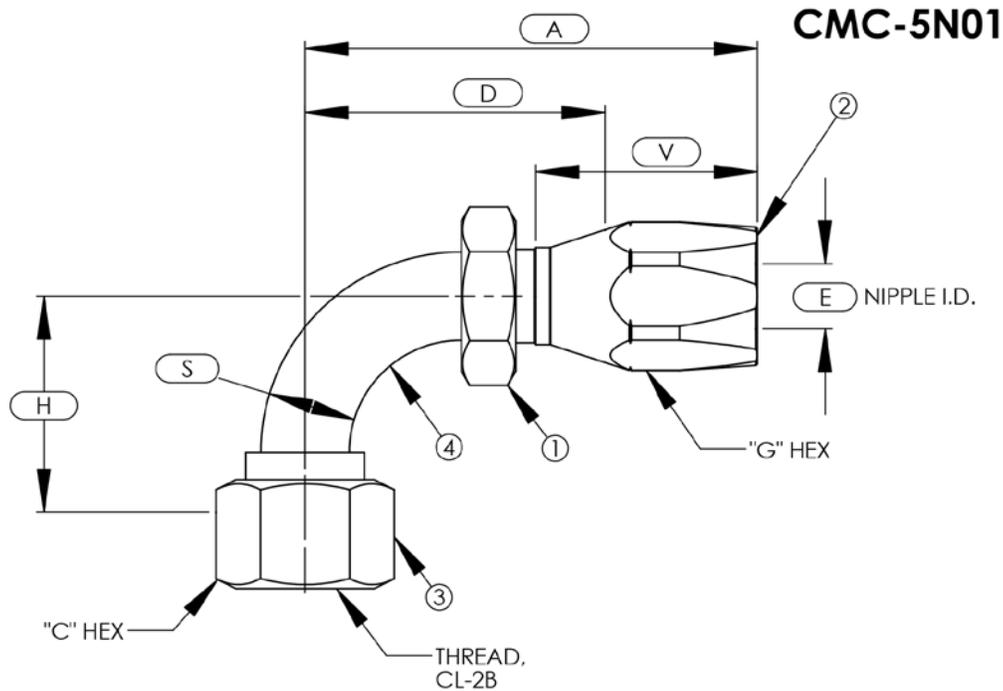
CMC-XX-5511-04-04

└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Hose End Fittings

**90° Elbow (Short)
37° Flare Female Swivel**

For SAE 100R5 Hose



ASSY PART NUMBER	HOSE SIZE	THREAD	A	C	D	E	G	H	S	V
CMC-X-5N01-04-SHORT	4	7/16-20	1.74	.56	.99	.13	.62	.68	.25	1.10
CMC-X-5N01-05-SHORT	5	1/2-20	1.96	.62	1.18	.17	.69	.77	.31	1.20
CMC-X-5N01-06-SHORT	6	9/16-18	2.13	.69	1.23	.24	.81	.85	.38	1.30
CMC-X-5N01-08-SHORT	8	3/4-16	2.76	.88	1.61	.36	.94	1.09	.50	1.65
CMC-X-5N01-10-SHORT	10	7/8-14	2.94	1.00	1.65	.46	1.12	1.23	.63	1.80
CMC-X-5N01-12-SHORT	12	1-1/16-12	3.74	1.25	2.17	.55	1.25	1.82	.75	2.10
CMC-X-5N01-08-12-SHORT	12	3/4-16	3.21	.88	1.64	.55	1.25	1.09	.50	2.10
CMC-X-5N01-16-SHORT	16	1-5/16-12	3.55	1.50	2.28	.82	1.44	2.39	1.00	1.66
CMC-X-5N01-20-SHORT	20	1-5/8-12	4.02	2.00	2.65	1.05	1.75	2.75	2.25	1.75

B.O.M.

COMPONENT PART NUMBERS

- ① ALL SIZES-.....NI-5N01-(TUBE SIZE)-(HOSE SIZE)-(MATL CODE)
- ② ALL SIZES-.....SO-5001-(SIZE)-(MATL CODE)
- ③ ALL SIZES-.....NUT
- ④ MONEL- SIZES 4 THRU 12.....TUBE
- ④ COPPER NICKEL-SIZES 16 AND 20....TUBE

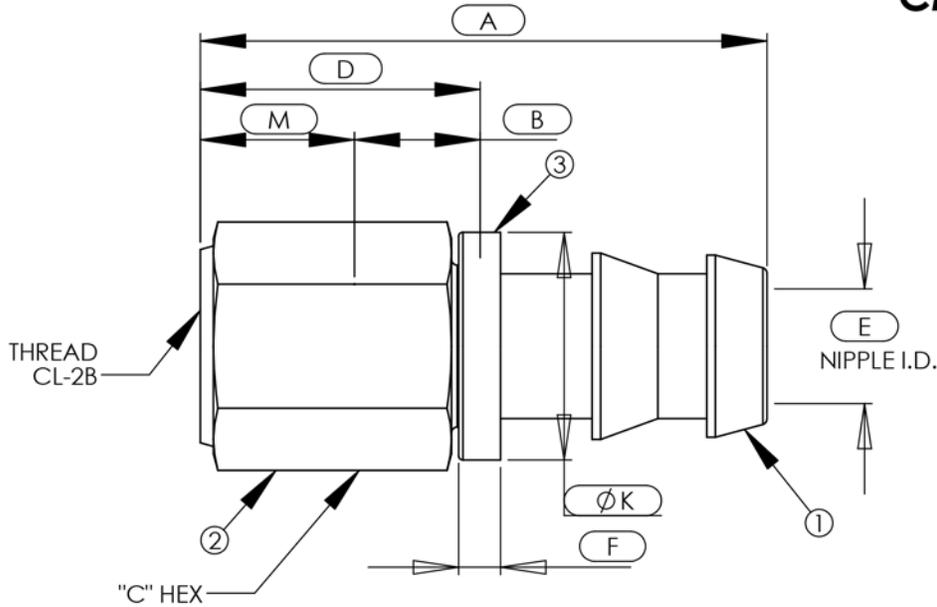
-EXAMPLE-

CMC-X-5N01-04-SHORT

└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

For Push On Hose

CMC-5505



ASSY PART NUMBER	HOSE SIZE	THREAD	A	B	C	D	E	F	K	M
CMC-XX-5505-04-04	1/4	7/16-20	1.46	0.35	0.56	0.70	0.17	0.16	0.58	0.35
CMC-XX-5505-06-06	3/8	9/16-18	1.67	0.39	0.69	0.80	0.30	0.16	0.72	0.41
CMC-XX-5505-08-08	1/2	3/4-16	1.95	0.44	0.88	0.94	0.39	0.16	0.87	0.49
CMC-XX-5505-10-10	5/8	7/8-14	2.60	0.48	1.00	1.06	0.48	0.16	1.06	0.58
CMC-XX-5505-12-12	3/4	1-1/16-12	2.71	0.55	1.25	1.19	0.61	0.16	1.18	0.64

B.O.M.

COMPONENT PART NUMBERS

② ALL SIZES-.....NI-5505-(TUBE SIZE)-(HOSE SIZE)

③ ALL SIZES-.....SWIVEL NUT

⑦ PLASTIC- ALL SIZES-.....COLLAR

-EXAMPLE-

CMC-XX-5505-04-04

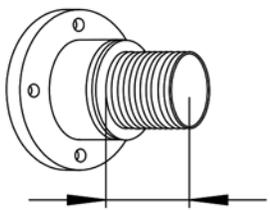
└─SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® Inner Support Sleeve CMC-SC-000

Hose Inner Support Sleeve

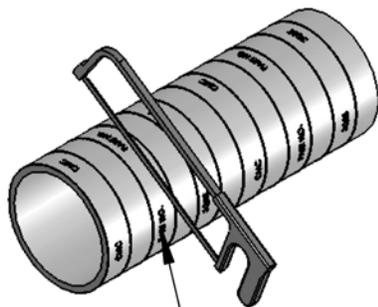
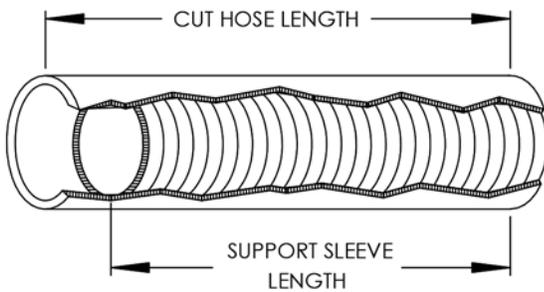
INSTRUCTIONS FOR INSTALLATION OF CMC SUPPORT SLEEVE

- 1) Cut hose to desired length. Remove any rubber dust.
- 2) Measure both hose and nipple lengths and add 5/8 inch. Subtract the resultant length from the cut hose length. This equals the total length of support sleeves required.
- 3) After determining the total length of sleeves required, it may be necessary to cut one or two sleeves to create the exact length. Follow these guidelines if cutting is required.
 - A) Sleeves should contain no less than two (2) bronze rings.
 - B) Cut only between the ribs in the "stenciled" area.
 - C) Clean the rubber dust and particles from each support sleeve.
- 4) Install the first hose fitting on one end of the hose.
- 5) Install each sleeve into the hose. If three or more sleeves are required, install the shortest sections in the middle.
- 6) To verify that all cuts and computations are correct, a tolerance check is recommended. This can be done by measuring the distance from the end of the inner support sleeve(s) to the end of the hose. This distance should equal the length of the (uninstalled) hose nipple plus 1/4" to plus 1".
- 7) Install the second hose end fitting.

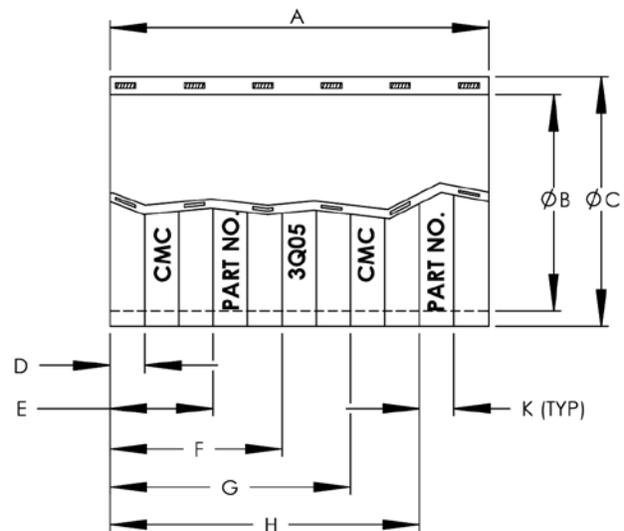


LENGTH X 2 + 5/8" =
AMOUNT TO SUBTRACT
FROM CUT HOSE LENGTH.

CMC PART NO.	A	B	C	D	E	F	G	H	K	Rings Per Sleeves	Hose I.D. (Nom) See Note 4
CMC-SC-1-004	4.00	3.50	3.91	0.78	1.78	2.78			0.44	4	4 Inches
CMC-SC-1-005	4.88	4.40	4.93	0.91	2.16	3.41			0.56	4	5 Inches
CMC-SC-1-006	6.12	5.40	5.93	0.91	2.16	3.41	4.66		0.56	5	6 Inches
CMC-SC-1-008	7.50	7.40	7.93	1.04	2.28	3.54	4.78	6.04	0.44	6	8 Inches
CMC-SC-1-010	7.50	9.40	9.93	1.04	2.28	3.54	4.78	6.04	0.44	6	10 Inches
CMC-SC-1-012	7.50	11.40	11.93	1.04	2.28	3.54	4.78	6.04	0.44	6	12 Inches



CUT ON STENCILED AREA,
NOT ON THE RINGS

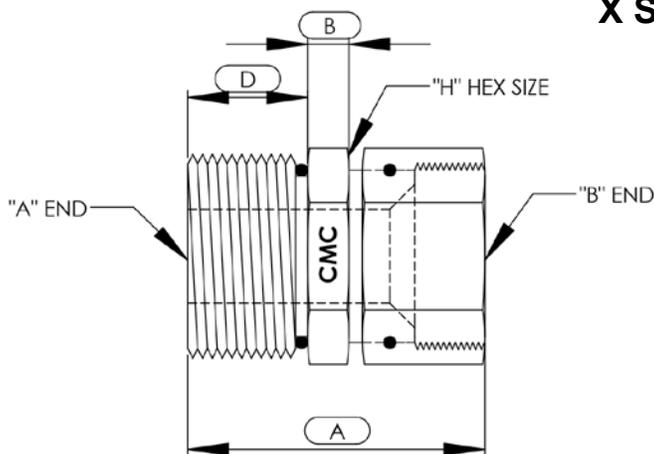


NOTES:

- 1) Temperature range -40 F to +200 F
- 2) For lengths less than "A":
 - a) Cut only in stenciled area between ribs.
 - b) Minimum usable length must include 2 bronze rings.
- 3) Material: Nickel Alum. Bronze rings with Buna-N Bonding.
- 4) Fits full I.D. Hose (tolerances equal to MIL-H-24136/1).

CMC® Swivel Connectors

37° Flare Swivel X SAE Straight Thread

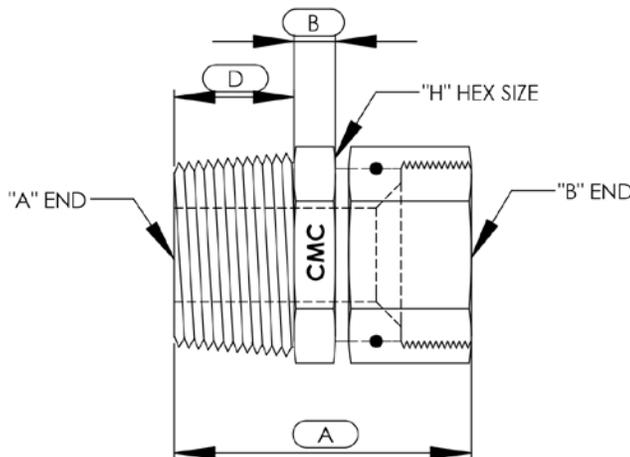


*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	STR THD, "A" END	A*	B	H	D
CMC-X-4G-4D	1/4	7/16-20 UNF-2A	1.35	.250	9/16	.36
CMC-X-6G-6D	3/8	9/16-18 UNF-2A	1.54	.310	11/16	.39
CMC-X-8G-8D	1/2	3/4-16 UNF-2A	1.75	.340	7/8	.44
CMC-X-10G-10D	5/8	7/8-14 UNF-2A	2.04	.400	1	.50
CMC-X-12G-12D	3/4	1-1/16-12 UNF-2A	2.28	.470	1-1/4	.59
CMC-X-16G-16D	1	1-5/16-12 UNF-2A	2.34	.500	1-1/2	.59
CMC-X-20G-20D	1-1/4	1-5/8-12 UNF-2A	2.47	.580	1-7/8	.59
CMC-X-24G-24D	1-1/2	1-7/8-12 UNF-2A	2.82	.650	2-1/8	.59
CMC-X-32G-32D	2	2-1/2-12 UNF-2A	3.28	.810	2-3/4	.59

37° Flare Swivel X Male Pipe Thread



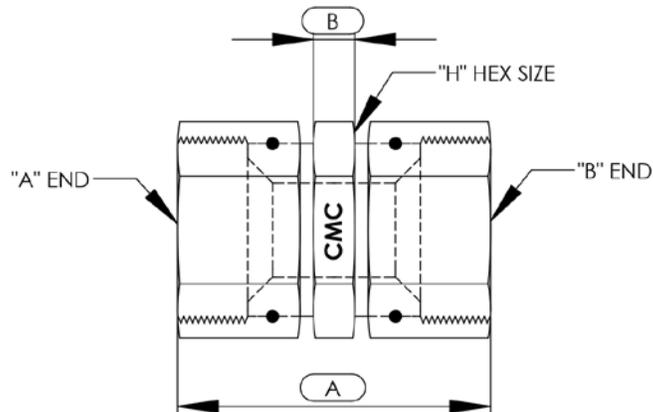
*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	PIPE THD "A" END	A*	B	H	D
CMC-X-4A-4D	1/4	1/4	1.52	.22	9/16	.56
CMC-X-6A-6D	3/8	3/8	1.65	.25	3/4	.56
CMC-X-8A-8D	1/2	1/2	2.03	.31	7/8	.75
CMC-X-8A-10D	5/8	1/2	2.20	.31	1	.75
CMC-X-12A-12D	3/4	3/4	2.35	.38	1-1/8	.75
CMC-X-16A-16D	1	1	2.57	.38	1-3/8	.94
CMC-X-20A-20D	1-1/4	1-1/4	2.73	.46	1-3/4	.97
CMC-X-24A-24D	1-1/2	1-1/2	3.11	.53	2	1.00
CMC-X-32A-32D	2	2	3.59	.68	2-5/8	1.03

CMC® Swivel Connectors

37° Flare X 37° Flare Swivel Both Ends

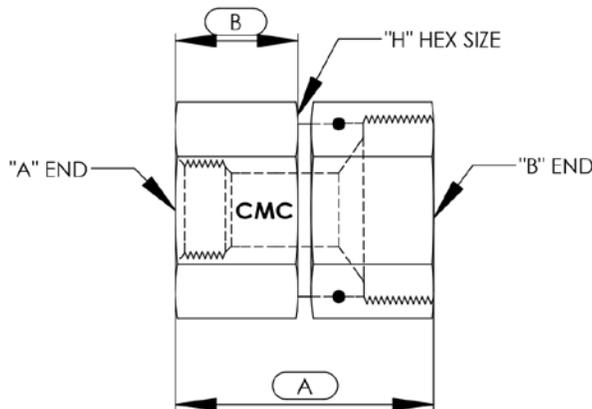


*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	TUBE O.D. "B" END	A*	B	H
CMC-X-4D-4D	1/4	1/4	1.73	.250	9/16
CMC-X-6D-6D	3/8	3/8	1.78	.310	11/16
CMC-X-8D-8D	1/2	1/2	2.28	.340	7/8
CMC-X-10D-10D	5/8	5/8	2.68	.400	1
CMC-X-12D-12D	3/4	3/4	2.68	.470	1-1/4
CMC-X-16D-16D	1	1	3.00	.500	1-1/2
CMC-X-20D-20D	1-1/4	1-1/4	3.18	.580	1-7/8
CMC-X-24D-24D	1-1/2	1-1/2	3.53	.650	2-1/8
CMC-X-32D-32D	2	2	4.57	.810	2-3/4

37° Flare Swivel X And 10050 Female Port



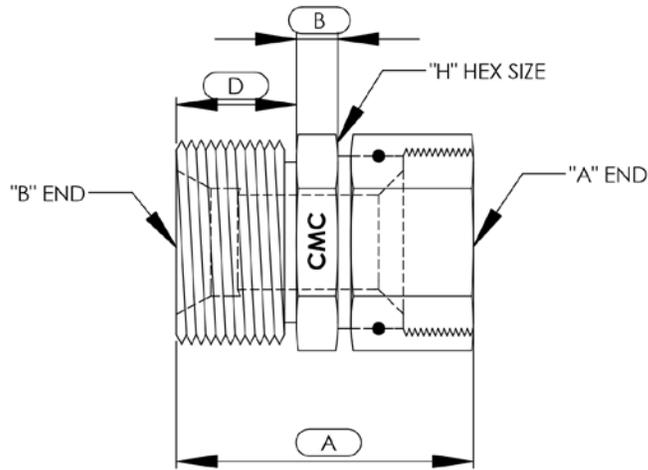
*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	FEM STR THD "A" END	A*	B	H
CMC-X-4D-4H	1/4	7/16-20 UNF-2A	1.40	9/16	11/16
CMC-X-6D-6H	3/8	9/16-18 UNF-2A	1.65	5/8	7/8
CMC-X-8D-8H	1/2	3/4-16 UNF-2A	1.75	3/4	1
CMC-10D-10H	5/8	7/8-14 UNF-2A	2.04	7/8	1-1/8
CMC-X-12D-12H	3/4	1-1/16-12 UNF-2A	2.18	1	1-3/8
CMC-X-16D-16H	1	1-5/16-12 UNF-2A	2.34	1-1/8	1-5/8
CMC-X-20D-20H	1-1/4	1-5/8-12 UNF-2A	2.45	1-1/8	2
CMC-X-24D-24H	1-1/2	1-7/8-12 UNF-2A	2.70	1-1/8	2-1/4
CMC-X-32D-32H	2	2-1/2-12 UNF-2A	3.13	1-1/4	3

CMC® Swivel Connectors

37° Flare Swivel X Male Flareless

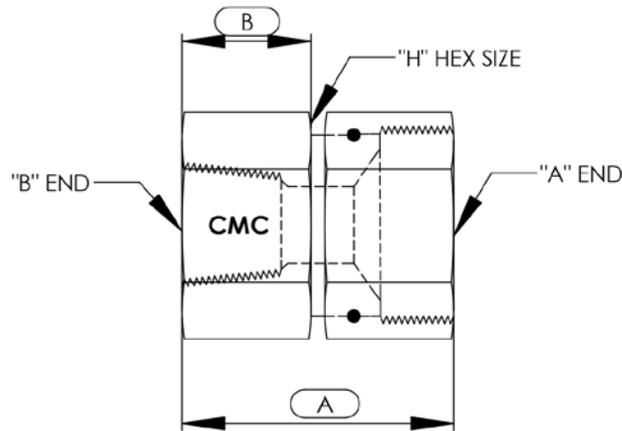


*Approximate Dimension

To Order Alternate Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	TUBE O.D. "B" END	A*	B	H	D
CMC-X-4E-4D	1/4	1/4	1.35	.28	9/16	.36
CMC-X-6E-6D	3/8	3/8	1.52	.31	11/16	.39
CMC-X-8E-8D	1/2	1/2	1.72	.34	7/8	.44
CMC-X-10E-10D	5/8	5/8	1.97	.40	1	.50
CMC-X-12E-12D	3/4	3/4	2.18	.47	1-1/4	.59
CMC-X-16E-16D	1	1	2.31	.50	1-1/2	.59
CMC-X-20E-20D	1-1/4	1-1/4	2.49	.58	1-7/8	.59
CMC-X-24E-24D	1-1/2	1-1/2	2.75	.65	2-1/8	.59
CMC-X-32E-32D	2	2	3.24	.81	2-3/4	.59

37° Flare Swivel X Female Pipe Thread



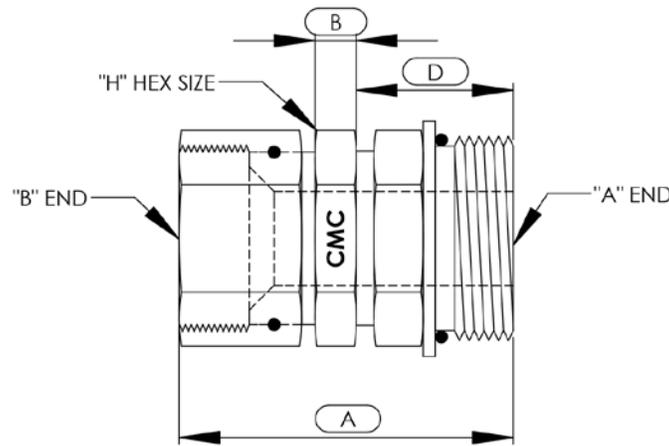
*Approximate Dimension

To Order Alternate Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	FEM PIPE THD "B" END	A*	B	H
CMC-X-4B-4D	1/4	1/4	1.35	.61	11/16
CMC-X-6B-6D	3/8	3/8	1.68	.84	13/16
CMC-X-8B-8D	1/2	1/2	1.87	.90	1
CMC-X-10B-10D	5/8	1/2	2.27	1.13	1-1/4
CMC-X-12B-12D	3/4	3/4	2.42	1.20	1-3/8
CMC-X-16B-16D	1	1	2.71	1.46	1-5/8
CMC-X-20B-20D	1-1/4	1-1/4	2.83	1.53	2
CMC-X-24B-24D	1-1/2	1-1/2	3.12	1.54	2-1/4
CMC-X-32B-32D	2	2	3.52	1.64	2-3/4

CMC® Swivel Connectors

37° Flare Swivel X Bulkhead Connection

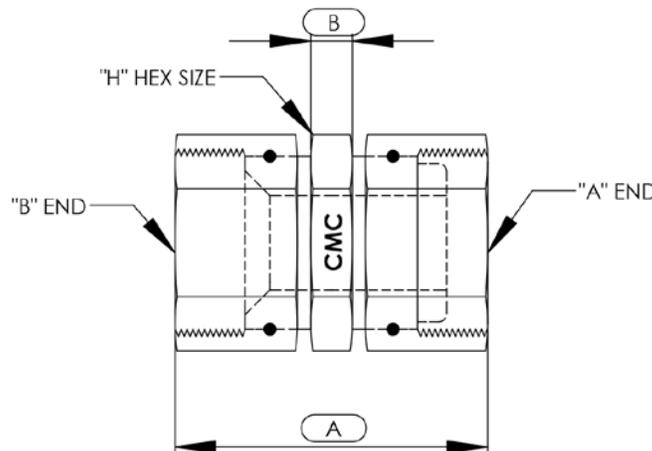


*Approximate Dimension

To Order Alternate Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	THREAD "A" END	A*	B	H	D
CMC-X-4D-4J	1/4	7/16-20 UNF-2A	1.66	.250	9/16	45/64
CMC-X-6D-6J	3/8	9/16-18 UNF-2A	1.89	.310	11/16	49/64
CMC-X-8D-8J	1/2	3/4-16 UNF-2A	2.15	.340	7/8	7/8
CMC-X-10D-10J	5/8	7/8-14 UNF-2A	2.48	.400	1	1-1/64
CMC-X-12D-12J	3/4	1-1/16-12 UNF-2A	2.74	.470	1-1/4	1-5/32
CMC-X-16D-16J	1	1-5/16-12 UNF-2A	2.87	.500	1-1/2	1-5/32
CMC-X-20D-20J	1-1/4	1-5/8-12 UNF-2A	3.05	.580	1-7/8	1-5/32
CMC-X-24D-24J	1-1/2	1-7/8-12 UNF-2A	3.31	.650	2-1/8	1-5/32
CMC-X-32D-32J	2	2-1/2-12 UNF-2A	3.80	.810	2-3/4	1-5/32

37° Flare X Flareless Swivel Both Ends



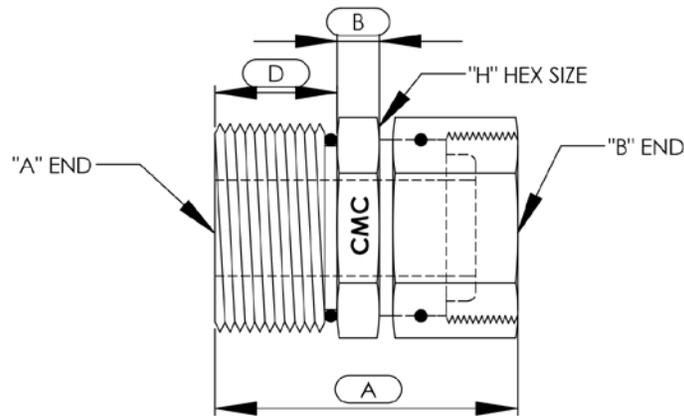
*Approximate Dimension

To Order Alternate Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	TUBE O.D. "B" END	A*	B	H
CMC-X-4D-4F	1/4	1/4	1.76	.250	9/16
CMC-X-6D-6F	3/8	3/8	1.98	.310	11/16
CMC-X-8D-8F	1/2	1/2	2.22	.340	7/8
CMC-X-10D-10F	5/8	5/8	2.49	.400	1
CMC-X-12D-12F	3/4	3/4	2.66	.470	1-1/4
CMC-X-16D-16F	1	1	2.87	.500	1-1/2
CMC-X-20D-20F	1-1/4	1-1/4	3.05	.580	1-7/8
CMC-X-24D-24F	1-1/2	1-1/2	3.29	.650	2-1/8
CMC-X-32D-32F	2	2	3.87	.810	2-3/4

CMC® Swivel Connectors

Flareless Swivel X SAE Straight Thread O-Ring Seal

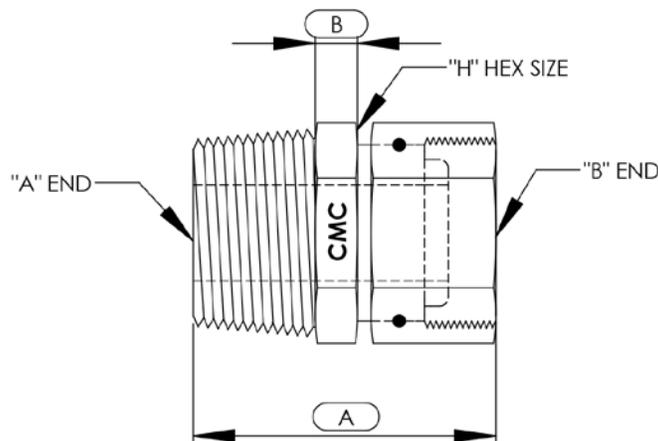


*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	STR THD "A" END	A*	B	H	D
CMC-X-4G-4F	1/4	7/16-20 UNF-2A	1.43	.25	9/16	.36
CMC-X-6G-6F	3/8	9/16-18 UNF-2A	1.57	.31	11/16	.39
CMC-X-8G-8F	1/2	3/4-16 UNF-2A	1.74	.34	7/8	.44
CMC-X-10G-10F	5/8	7/8-14 UNF-2A	1.94	.40	1	.50
CMC-X-12G-12F	3/4	1-1/16-12 UNF-2A	2.15	.47	1-1/4	.59
CMC-X-16G-16F	1	1-5/16-12 UNF-2A	2.26	.50	1-1/2	.59
CMC-X-20G-20F	1-1/4	1-5/8-12 UNF-2A	2.34	.58	1-7/8	.59
CMC-X-24G-24F	1-1/2	1-7/8-12 UNF-2A	2.39	.65	2-1/8	.59
CMC-X-32G-32F	2	2-1/2-12 UNF-2A	2.64	.81	2-3/4	.59

Flareless Swivel X Male Pipe Thread



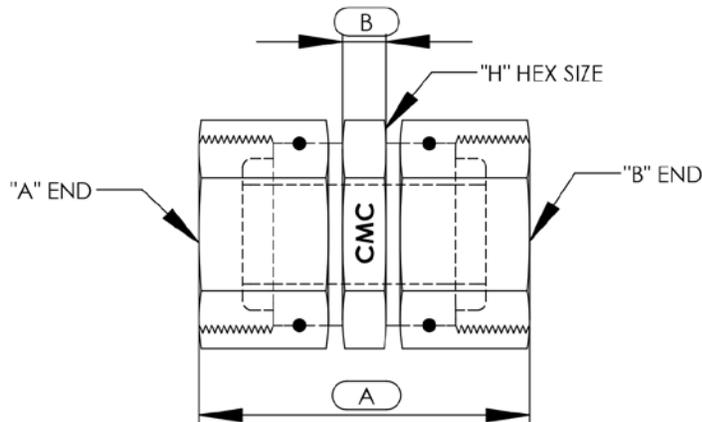
*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	PIPE THD "A" END	A*	B	H
CMC-X-4A-4F	1/4	1/4	1.63	.25	9/16
CMC-X-6A-6F	3/8	3/8	1.74	.31	11/16
CMC-X-8A-8F	1/2	1/2	2.05	.34	7/8
CMC-X-10A-10F	5/8	5/8	2.19	.40	1
CMC-X-12A-12F	3/4	3/4	2.21	.47	1-1/4
CMC-X-16A-16F	1	1	2.61	.50	1-1/2
CMC-X-20A-20F	1-1/4	1-1/4	2.72	.58	1-7/8
CMC-X-24A-24F	1-1/2	1-1/2	2.80	.65	2-1/8
CMC-X-32A-32F	2	2	3.08	.81	2-3/4

CMC® Swivel Connectors

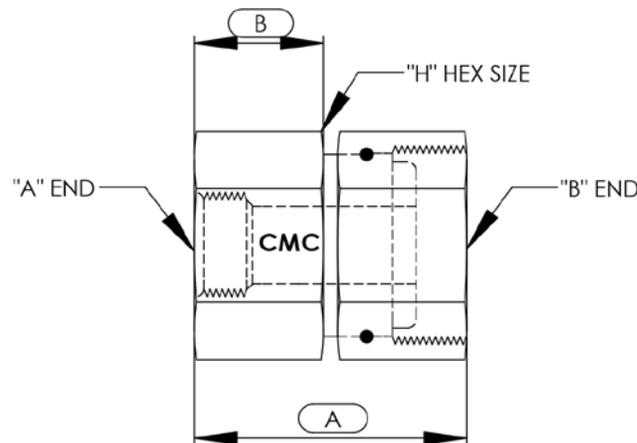
Flareless Swivel X Flareless Swivel



*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	TUBE O.D. "B" END	A*	B	H
CMC-X-4F-4F	1/4	1/4	1.90	.25	9/16
CMC-X-6F-6F	3/8	3/8	2.06	.31	11/16
CMC-X-8F-8F	1/2	1/2	2.27	.34	7/8
CMC-X-10F-10F	5/8	5/8	2.49	.40	1
CMC-X-12F-12F	3/4	3/4	2.66	.47	1-1/4
CMC-X-16F-16F	1	1	2.85	.50	1-1/2
CMC-X-20F-20F	1-1/4	1-1/4	2.93	.58	1-7/8
CMC-X-24F-24F	1-1/2	1-1/2	2.96	.65	2-1/8
CMC-X-32F-32F	2	2	3.30	.81	2-3/4



Flareless Swivel X And 10050 Female Port O-Ring Seal

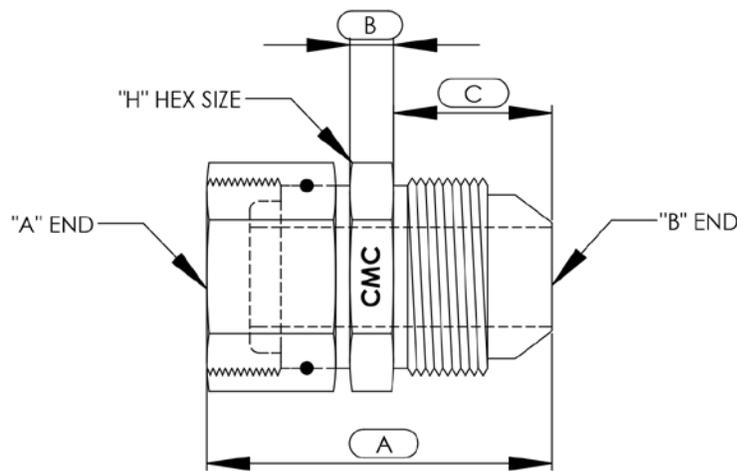
*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "B" END	FEM STR THD "A" END	A*	B	H
CMC-X-4H-4F	1/4	7/16-20 UNF-2A	1.38	9/16	11/16
CMC-X-6H-6F	3/8	9/16-20 UNF-2A	1.49	5/8	7/8
CMC-X-8H-8F	1/2	3/4-16 UNF-2A	1.71	3/4	1
CMC-X-10H-10F	5/8	7/8-14 UNF-2A	1.92	7/8	1-1/8
CMC-X-12H-12F	3/4	1-1/16-12 UNF-2A	2.09	1	1-3/8
CMC-X-16H-16F	1	1-5/16-12 UNF-2A	2.30	1-1/8	1-5/8
CMC-X-20H-20F	1-1/4	1-5/8-12 UNF-2A	2.30	1-1/8	2
CMC-X-24H-24F	1-1/2	1-7/8-12 UNF-2A	2.28	1-1/8	2-1/4
CMC-X-32H-32F	2	2-1/2-12 UNF-2A	2.50	1-1/4	3

CMC® Swivel Connectors

37° Male Flare X Flareless Swivel

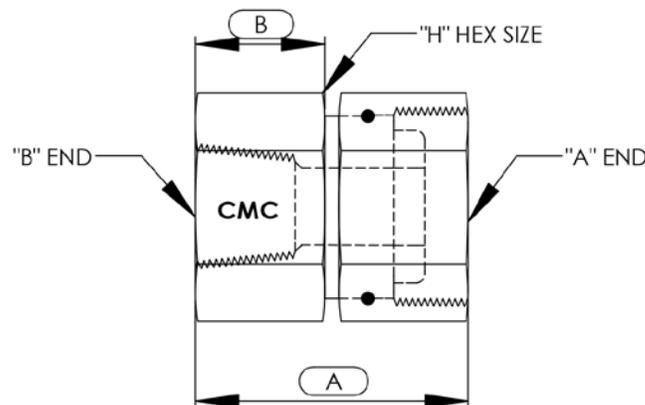


*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	TUBE O.D. "B" END A*	B	C	H	
CMC-X-4F-4C	1/4	1/4	1.60	.25	.55	9/16
CMC-X-6F-6C	3/8	3/8	1.72	.31	.56	11/16
CMC-X-8F-8C	1/2	1/2	1.94	.34	.66	7/8
CMC-X-10F-10C	5/8	5/8	2.18	.40	.76	1
CMC-X-12F-12C	3/4	3/4	2.40	.47	.86	1-1/4
CMC-X-16F-16C	1	1	2.56	.50	.91	1-1/2
CMC-X-20F-20C	1-1/4	1-1/4	2.69	.58	.96	1-7/8
CMC-X-24F-24C	1-1/2	1-1/2	2.86	.65	1.08	2-1/8
CMC-X-32F-32C	2	2	3.36	.81	1.33	2-3/4

Flareless Swivel X Female Pipe Thread



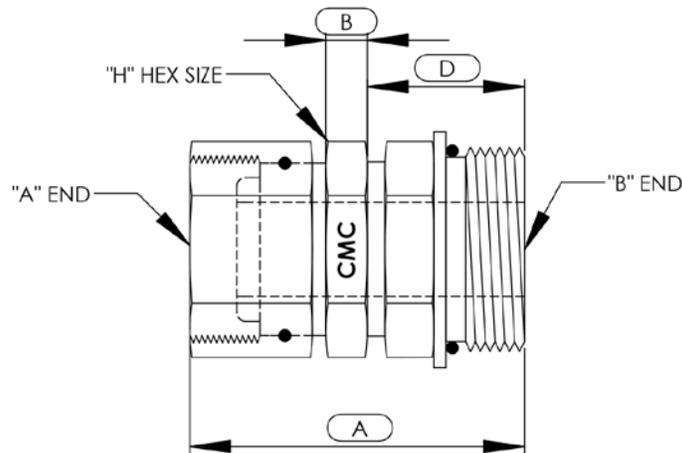
*Approximate Dimension

To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END FEM	PIPE THD "B" END	A*	B	H
CMC-X-4B-4F	1/4	1/4	1.43	.61	11/16
CMC-X-6B-6F	3/8	3/8	1.71	.84	13/16
CMC-X-8B-8F	1/2	1/2	1.86	.90	1
CMC-X-8B-10F	5/8	1/2	2.18	1.13	1-1/4
CMC-X-12B-12F	3/4	3/4	2.22	1.20	1-3/8
CMC-X-16B-16F	1	1	2.64	1.46	1-5/8
CMC-X-20B-20F	1-1/4	1-1/4	2.71	1.53	2
CMC-X-24B-24F	1-1/2	1-1/2	2.70	1.54	2-1/4
CMC-X-32B-32F	2	2	2.89	1.64	2-3/4

CMC® Swivel Connectors

Flareless Swivel X Bulkhead Connection



*Approximate Dimension

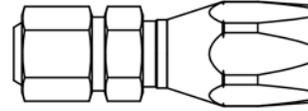
To Order Alternate
Materials, See Page 3.

PART NUMBER	TUBE O.D. "A" END	THREAD "B" END	A*	B	H	D
CMC-X-4F-4J	1/4	7/16-20 UNF-2A	1.75	.250	9/16	45/64
CMC-X-6F-6J	3/8	9/16-18 UNF-2A	1.92	.310	11/16	49/64
CMC-X-8F-8J	1/2	3/4-16 UNF-2A	2.15	.340	7/8	7/8
CMC-X-10F-10J	5/8	7/8-14 UNF-2A	2.43	.400	1	1-1/64
CMC-X-12F-12J	3/4	1-1/16-12 UNF-2A	2.69	.470	1-1/4	1-5/32
CMC-X-16F-16J	1	1-5/16-12 UNF-2A	2.80	.500	1-1/2	1-5/32
CMC-X-20F-20J	1-1/4	1-5/8-12 UNF-2A	2.88	.580	1-7/8	1-5/32
CMC-X-24F-24J	1-1/2	1-7/8-12 UNF-2A	2.93	.650	2-1/8	1-5/32
CMC-X-32F-32J	2	2-1/2-12 UNF-2A	3.18	.810	2-3/4	1-5/32

CMC® Hose End Fittings

Hose Assembly Instructions

CMC MIL-H-24135, /1, /2, /3 Hose and Fittings Assembly Instructions



STEP 1

Cut hose squarely, after cutting, clean all residue from inside and outside of hose. Use notch on socket to determine length of hose cover to be stripped, cut around hose through the cover to the wire braid. Split cover lengthwise, working CLOCKWISE, pry up cover, and twist off the cover with pliers. Clean any adhering rubber particles from wire. Be sure that the wire is not loose, frayed or flared when brushing. (Use wire brush or soft wire wheel)

NOTE: It may be necessary to cut an approximately 45° angle to the ID of the hose, going about 1/4" – 1/2" back. This chamfer will allow the nipple to enter the hose up the taper, to the beginning of the threads. This extra step will help ensure engagement between the nipple and socket threads.

STEP 2

Apply coating of sealing compound to ends of hose and to all exposed wire surfaces and wire ends. Allow to dry for one-half hour. *Do not allow end sealant to enter hose bore.* Immediately before installing socket, apply a second coat of sealing compound over the first coat.

STEP 3

For multiple-wire braid reinforced hose, place fitting socket in vise and screw hose COUNTER-CLOCKWISE into the end of socket until it bottoms out, then back off 1/4 turn.

For spiral reinforced hose, place the hose in vise and push socket onto hose until it bottoms onto the hose. After starting the socket onto the hose, tap on with a lead hammer to avoid thread damage.

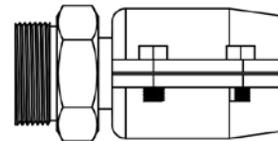
STEP 4

Lubricate nipple threads and inside of hose liberally with a petroleum base oil. For Fire Resistant Hose, use a NON-PETROLEUM based oil, because petroleum based oil will damage inner liner of hose.

STEP 5

Screw nipple CLOCKWISE into socket and hose. Leave 1/32" to 1/16" clearance between nipple hex and the socket. Place a band of sealing compound around the hose end of the socket and the hose.

CMC MIL-H-24136/2 Fittings Assembly Instructions



STEP 1

Cut off hose squarely. After cutting, clean all residue from inside and outside surface of hose. Lubricate inside and outside of hose end and outside of nipple including grooves with a LIBERAL amount of heavy oil (STP Type).

STEP 2

Insert nipple into hose until hose bottoms against nipple shoulder. Apply (Molykote G™) to bolt threads, holes (threaded) in clamps and bolt head bearing surface of clamps.

STEP 3

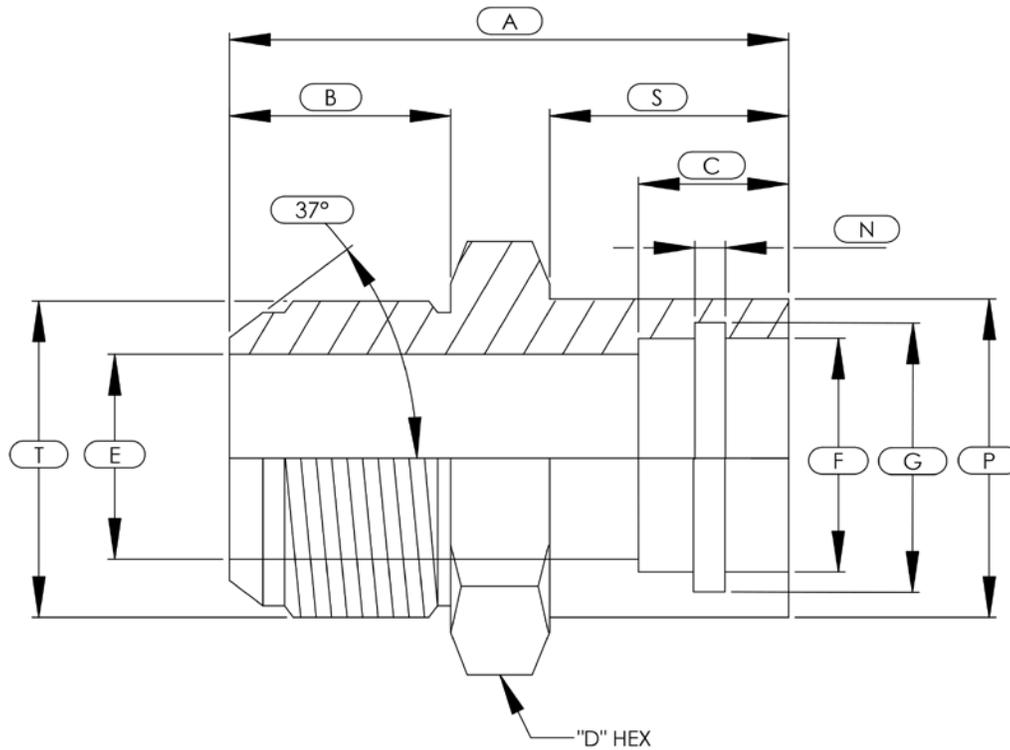
Place shoulder of clamp into nipple groove. Insert bolts through unthreaded holes then into threaded holes and finger tighten.

STEP 4

Torque bolts alternately and evenly until clamps meet.

CMC® SIL-BRAZE Connectors
 Equivalent to Aeroquip P/N: 202240

**37° Flare X
 Female Sil-Braze**

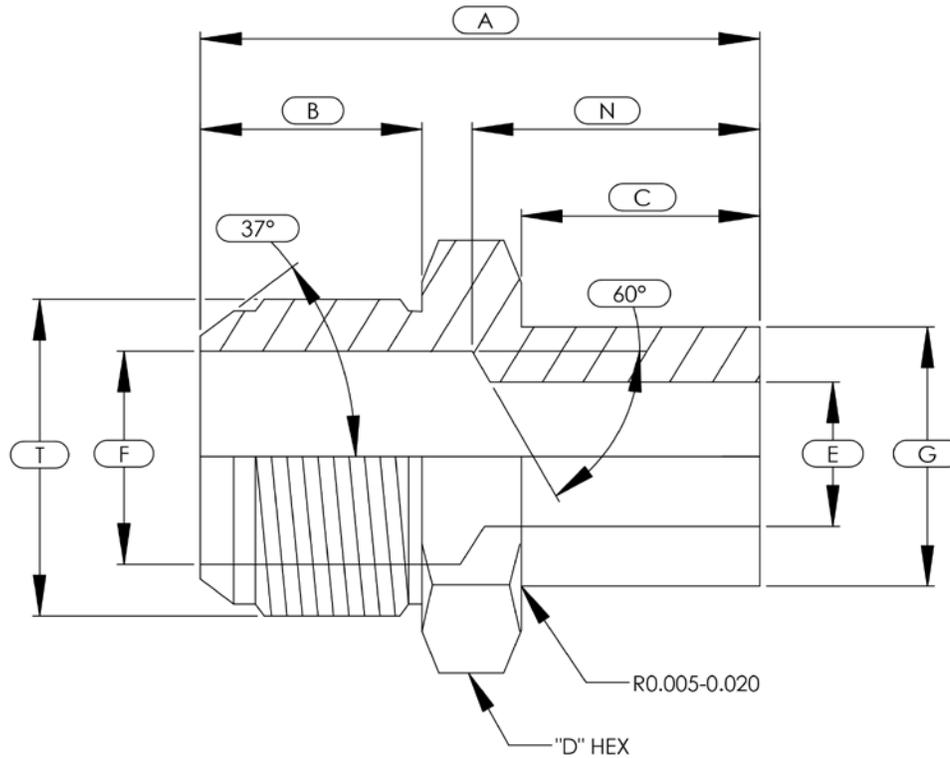


PART NUMBER	O.D. TUBE SIZE	THREAD "T" CLASS 2A										
			A	B	C	D	E	F	G	N	P	S
CMC-X-4C-1/4-FS/B	1/4	7/16-20	1.05	0.55	0.25	0.69	0.17	0.25	0.32	0.05	0.67	0.26
CMC-X-6C-3/8-FS/B	3/8	9/16-18	1.24	0.56	0.31	0.88	0.30	0.38	0.48	0.06	0.86	0.33
CMC-X-8C-1/2-FS/B	1/2	3/4-16	1.41	0.66	0.47	1.00	0.42	0.50	0.60	0.08	0.98	0.49
CMC-X-12C-3/4-FS/B	3/4	1-1/16-12	2.04	0.86	0.56	1.44	0.52	0.75	0.87	0.19	1.42	0.58
CMC-X-16C-1-FS/B	1	1-5/16-12	2.21	0.91	0.69	1.69	0.72	1.00	1.12	0.19	1.67	0.71
CMC-X-20C-1 1/4-FS/B	1-1/4	1-5/8-12	2.44	0.96	0.81	2.00	0.90	1.25	1.37	0.19	1.98	0.83
CMC-X-24C-1 1/2-FS/B	1-1/2	1-7/8-12	2.88	1.08	0.94	2.44	1.08	1.50	1.68	0.26	2.42	0.96
CMC-X-32C-2-FS/B	2	2-1/2-12	3.33	1.33	1.06	2.88	1.40	2.00	2.18	0.26	2.86	1.08

CMC-X-4C-1/4-FS/B
 SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® SIL-BRAZE Connectors
 Equivalent to Aeroquip P/N: 202140

**37° Flare X
 Male Sil-Braze**



PART NUMBER	O.D. TUBE SIZE	THREAD "T" CLASS 2A								
			A	B	C	D	E	F	G	N
CMC-X-4C-1/4-MS/B	1/4	7/16-20	1.36	0.55	0.62	0.50	0.17	0.17	0.25	0.80
CMC-X-6C-3/8-MS/B	3/8	9/16-18	1.43	0.56	0.62	0.62	0.27	0.27	0.37	0.80
CMC-X-8C-1/2-MS/B	1/2	3/4-16	1.63	0.66	0.72	0.81	0.35	0.39	0.50	0.90
CMC-X-12C-3/4-MS/B	3/4	1-1/16-12	2.06	0.86	0.81	1.12	0.52	0.61	0.75	1.00
CMC-X-16C-1-MS/B	1	1-5/16-12	2.35	0.91	1.06	1.38	0.72	0.84	1.00	1.25
CMC-X-20C-1-1/4-MS/B	1-1/4	1-5/8-12	2.59	0.96	1.19	1.69	0.90	1.08	1.25	1.40
CMC-X-24C-1-1/2-MS/B	1-1/2	1-7/8-12	3.02	1.08	1.44	2.00	1.08	1.31	1.50	1.70
CMC-X-32C-2-MS/B	2	2-1/2-12	3.58	1.33	1.56	2.62	1.40	1.78	2.00	1.95

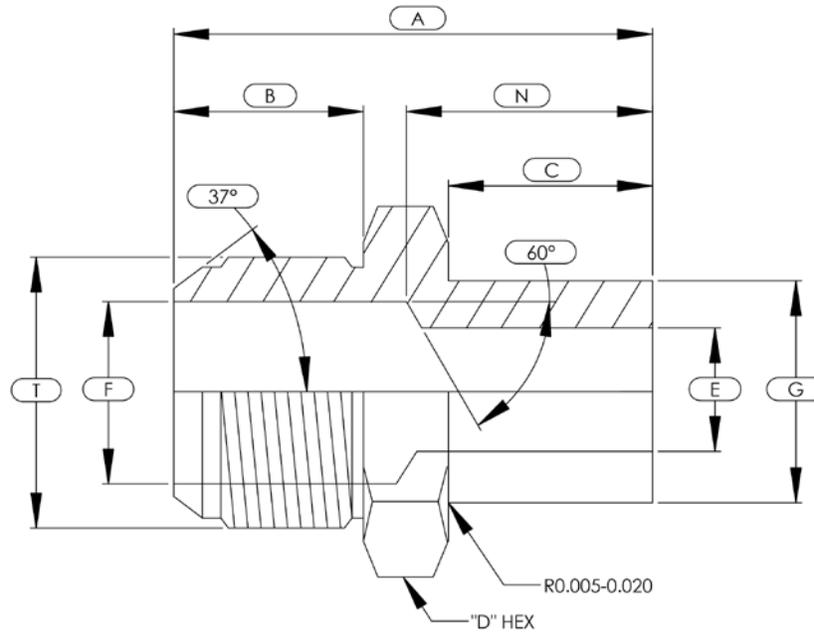
CMC-X-4C-1/4-MS/B

└─ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® SIL-BRAZE Connectors

Equivalent to Aeroquip P/N: 202142

37° Flare X
Male Socket Weld



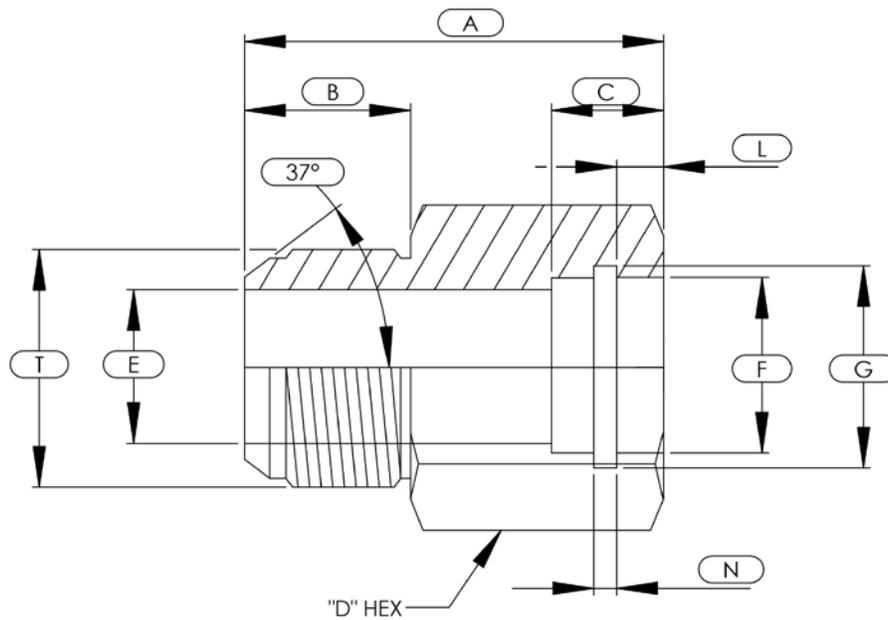
PART NUMBER	IPS SIZE	THREAD "T" CLASS 2A								
			A	B	C	D	E	F	G	N
CMC-X-4C-1/8-MS/W	1/8	7/16-20	1.36	0.55	0.62	0.50	0.17	0.17	0.40	0.80
CMC-X-6C-1/8-MS/W	1/8	9/16-18	1.43	0.56	0.62	0.62	0.22	0.30	0.40	0.80
CMC-X-6C-1/4-MS/W	1/4	9/16-18	1.43	0.56	0.62	0.62	0.30	0.30	0.54	0.80
CMC-X-8C-1/4-MS/W	1/4	3/4-16	1.53	0.66	0.62	0.81	0.36	0.36	0.54	0.80
CMC-X-6C-3/8-MS/W	3/8	9/16-18	1.52	0.56	0.72	0.69	0.47	0.30	0.67	0.90
CMC-X-8C-3/8-MS/W	3/8	3/4-16	1.63	0.66	0.72	0.81	0.47	0.39	0.67	0.90
CMC-X-10C-3/8-MS/W	3/8	7/8-14	1.79	0.76	0.72	0.94	0.47	0.47	0.67	0.90
CMC-X-8C-1/2-MS/W	1/2	3/4-16	1.78	0.66	0.81	0.94	0.59	0.39	0.84	1.00
CMC-X-10C-1/2-MS/W	1/2	7/8-14	1.88	0.76	0.81	0.94	0.59	0.48	0.84	1.00
CMC-X-12C-1/2-MS/W	1/2	1-1/16-12	2.06	0.86	0.81	1.12	0.59	0.59	0.84	1.00
CMC-X-16C-1/2-MS/W	1/2	1-5/16-12	2.10	0.91	0.81	1.38	0.59	0.84	0.84	1.00
CMC-X-16C-3/4-MS/W	3/4	1-5/16-12	2.35	0.91	1.06	1.38	0.74	0.84	1.05	1.25
CMC-X-20C-3/4-MS/W	3/4	1-5/8-12	2.46	0.96	1.06	1.69	0.74	1.08	1.05	1.25
CMC-X-20C-1-MS/W	1	1-5/8-12	2.59	0.96	1.19	1.69	0.93	1.08	1.31	1.40
CMC-X-24C-1-MS/W	1	1-7/8-12	2.77	1.08	1.19	1.94	0.93	1.31	1.31	1.40
CMC-X-24C-1-1/4-MS/W	1-1/4	1-7/8-12	3.02	1.08	1.44	1.94	1.17	1.31	1.66	1.70
CMC-X-24C-1-1/2-MS/W	1-1/2	1-7/8-12	3.14	1.08	1.56	2.00	1.31	1.31	1.90	1.85
CMC-X-32C-1-1/2-MS/W	1-1/2	2-1/2-12	3.58	1.33	1.56	2.56	1.35	1.78	1.90	1.85
CMC-X-32C-2-MS/W	2	2-1/2-12	3.77	1.33	1.75	2.56	1.65	1.78	2.38	2.05

CMC-X-4C-1/8-MS/W

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® SIL-BRAZE Connectors
Equivalent to Aeroquip P/N: 202242

**37° Flare X
 Female Sil-Braze**



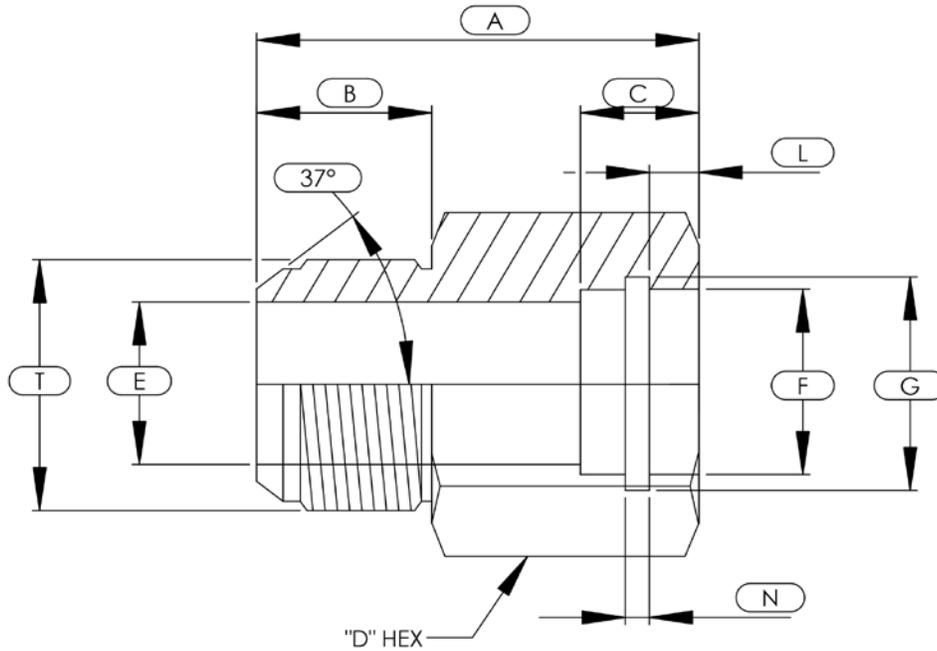
PART NUMBER	IPS SIZE	THREAD "T" CLASS 2A	DIMENSIONS									
			A	B	C	D	E	F	G	N	L	
CMC-X-4C-1/8-FSB/W	1/8	7/16-20	1.05	0.55	0.38	0.69	0.17	0.41	0.50	.08	.16	
CMC-X-6C-1/8-FSB/W	1/8	9/16-18	1.06	0.56	0.38	0.69	0.22	0.41	0.50	.08	.16	
CMC-X-6C-1/4-FSB/W	1/4	9/16-18	1.24	0.56	0.38	0.88	0.30	0.54	0.64	.08	.16	
CMC-X-8C-1/4-FSB/W	1/4	3/4-16	1.34	0.66	0.38	0.88	0.36	0.54	0.64	.08	.16	
CMC-X-6C-3/8-FSB/W	3/8	9/16-18	1.31	0.56	0.47	1.00	0.30	0.68	0.77	.08	.23	
CMC-X-8C-3/8-FSB/W	3/8	3/4-16	1.41	0.66	0.47	1.00	0.39	0.68	0.77	.08	.23	
CMC-X-10C-3/8-FSB/W	3/8	7/8-14	1.51	0.76	0.47	1.00	0.47	0.68	0.77	.08	.23	
CMC-X-10C-1/2-FSB/W	1/2	7/8-14	1.93	0.76	0.56	1.44	0.48	0.84	0.96	.19	.28	
CMC-X-12C-1/2-FSB/W	1/2	1-1/16-12	2.04	0.86	0.56	1.44	0.59	0.84	0.96	.19	.28	
CMC-X-16C-1/2-FSB/W	1/2	1-5/16-12	2.08	0.91	0.56	1.44	0.59	0.84	0.96	.19	.28	
CMC-X-16C-3/4-FSB/W	3/4	1-5/16-12	2.21	0.91	0.69	1.69	0.74	1.05	1.17	.19	.32	
CMC-X-20C-3/4-FSB/W	3/4	1-5/8-12	2.26	0.96	0.69	1.69	0.74	1.05	1.17	.19	.32	
CMC-X-20C-1-FSB/W	1	1-5/8-12	2.44	0.96	0.81	2.00	0.93	1.32	1.43	.19	.40	
CMC-X-24C-1-FSB/W	1	1-7/8-12	2.57	1.08	0.81	2.00	0.93	1.32	1.43	.19	.40	
CMC-X-24C-1-1/4-FSB/W	1-1/4	1-7/8-12	2.88	1.08	0.94	2.44	1.17	1.66	1.84	.26	.42	
CMC-X-24C-1-1/2-FSB/W	1-1/2	1-7/8-12	3.02	1.08	1.06	2.62	1.31	1.90	2.08	.26	.45	
CMC-X-32C-1-1/2-FSB/W	1-1/2	2-1/2-12	3.27	1.33	1.06	2.62	1.35	1.90	2.08	.26	.45	
CMC-X-32C-2-FSB/W	2	2-1/2-12	3.64	1.33	1.25	3.25	1.65	2.38	2.55	.26	.55	

CMC-X-4C-1/8-FSB/W

SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

CMC® SIL-BRAZE Connectors
 Equivalent to Aeroquip P/N: 202204

**37° Flare X
 Female S/B FF**

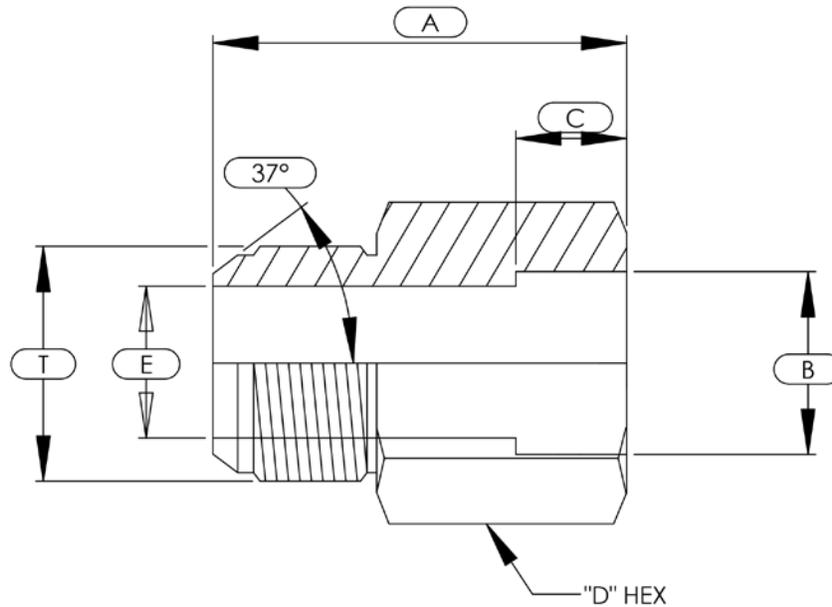


PART NUMBER	IPS SIZE	THREAD "T" CLASS	2A	A	B	C	D	E
			CMC-X-4C-1/8-FSB/FF	1/8	7/16-20	0.89	0.41	0.25
CMC-X-6C-1/8-FSB/FF	1/8	9/16-18	0.91	0.41	0.25	7/8	0.296	
CMC-X-8C-1/4-FSB/FF	1/4	3/4-16	1.20	0.56	0.40	7/8	0.391	
CMC-X-10C-3/8-FSB/FF	3/8	7/8-14	1.43	0.68	0.45	15/16	0.484	
CMC-X-12C-1/2-FSB/FF	1/2	1-1/16-12	1.54	0.85	0.52	1-1/4	0.600	
CMC-X-16C-1/2-FSB/FF	1/2	1-5/16-12	1.66	0.86	0.55	1-3/8	0.840	
CMC-X-16C-3/4-FSB/FF	3/4	1-5/16-12	1.83	1.05	0.67	1-3/8	0.840	
CMC-X-20C-3/4-FSB/FF	3/4	1-5/8-12	2.44	1.05	0.60	2.00	0.930	
CMC-X-20C-1-FSB/FF	1	1-5/8-12	2.45	1.32	0.80	2.00	0.930	
CMC-X-24C-1-FSB/FF	1	1-7/8-12	2.57	1.32	0.81	2.00	1.17	
CMC-X-24C-1-1/4-FSB/FF	1-1/4	1-7/8-12	2.25	1.67	0.77	2-1/4	1.31	
CMC-X-32C-1-1/2-FSB/FF	1-1/2	2-1/2-12	2.87	1.91	0.90	2-5/8	1.35	

CMC-X-4C-1/8-FS/BFF
 SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS

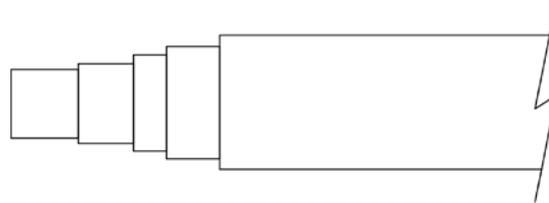
CMC® SIL-BRAZE Connectors
 Equivalent to Aeroquip P/N: 202232

**37° Flare X
 Female S/W**



PART NUMBER	IPS SIZE	THREAD "T" CLASS 2A	A	B	C	D	E
CMC-X-4C-1/8-FS/W	1/8	7/16-20	1.10	0.43	0.40	11/16	0.17
CMC-X-8C-1/4-FS/W	1/4	3/4-16	1.20	0.56	0.40	7/8	0.39
CMC-X-12C-1/2-FS/W	1/2	1-1/16-12	1.54	0.85	0.52	1-3/8	0.60
CMC-X-16C-3/4-FS/W	3/4	1-5/16-12	1.72	1.07	0.58	1-3/8	0.84
CMC-X-20C-1-FS/W	1	1-5/8-12	1.81	1.34	0.65	2.00	1.08
CMC-X-24C-1-1/2-FS/W	1-1/2	1-7/8-12	3.00	1.92	0.71	2-3/8	1.31
CMC-X-32C-1-1/2-FS/W	1-1/2	2-1/2-12	2.20	1.92	0.71	2-5/8	1.35

CMC-X-4C-1/8-FS/W
 ↳ SEE PAGE 2 FOR ASSY MATERIAL DESIGNATIONS



HOSE SIZE	WORKING PRESSURE (PSI)	BURST PRESSURE (PSI)	I.D. MIN	I.D. MAX	O.D. MIN	O.D. MAX	MIN BEND RAD
-4	2,500	10,000	0.234	0.266	0.844	0.906	4"
-6	2,000	8,000	0.359	0.390	0.968	1.031	5"
-8	2,000	8,000	0.465	0.531	1.094	1.156	7"
-12	1,500	6,000	0.718	0.781	1.469	1.531	9.5"
-16	1,400	5,600	0.968	1.031	1.750	1.812	11"
-20	1,000	4,000	1.211	1.289	1.975	2.069	16"
-24	1,000	4,000	1.461	1.539	2.203	2.297	20"
-32	900	3,600	1.961	2.039	2.702	2.828	25"

Reinforcement..... Braided, 3 layer

Cover.....Neoprene

Temperature range.....-40F to 200F

Standard length.....Continuous long lengths on reels or cut lengths

Branding.....Nylon, continuous strip

**PART NUMBER CROSS REFERENCE
CMC® TO AEROQUIP AND HYDRASEARCH**

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

CMC PART NUMBER	AEROQUIP PART NUMBER	HYDRASEARCH PART NUMBER	CMC PAGE #
CMC-SC-1-004	FF9700-64-262	ISS-64	55
CMC-SC-1-005	FF9700-80-262	ISS-80	55
CMC-SC-1-006	FF9700-96-262	ISS-96	55
CMC-SC-1-008	FF9700-128-262	ISS-128	55
CMC-SC-1-010	FF9700-160-262	ISS-160	55
CMC-SC-1-012	FF9700-192-262	ISS-192	55
CMC-X-5102-	FC9056-	EF-1600A5-	10
CMC-8-5110-	FC9568-188	EF-1546A1-	39
CMC-X-5111-	No direct crossover		27
CMC-8-5120-	FC9527-188	EF-1546A2	40
CMC-8-5120-	FC7750-188	EF-X-150/400F	40
CMC-X-5121-	No direct crossover		28
CMC-8-5130-	FC5188-188	EF-1546A3-	41
CMC-X-5131-	FJ9832	EF-X1488F3-	29
CMC-8-5140-	FC5309-188	EF-1546A4-	42
CMC-X-5141-	190016-	EF-X1488F4-	30
CMC-8-5150-	FC5048-188	EF-X1546A5-	43
CMC-8-5150-	FC7781-188	EF-X-150F-B16.5	43
CMC-X-5151-	190109-	EF-X1488F5-	31
CMC-X-5202-	FC9224-	90EF-1600B5-	11
CMC-X-5211-	No direct crossover	90EF-1488B1-	32
CMC-8-5220-	FC9637-188	90EF-1546B2-	45
CMC-8-5220-	FC7751-188	90EF-X-150/400	45
CMC-8-5230-	No direct crossover	90EF-X-250F	46
CMC-8-5230-	FJ9838-	90EF-1546B3-	46
CMC-X-5231	FJ9833-	90EF-X1488FL3-	34
CMC-8-5240	FJ9840-188	90EF-X-150F	47
CMC-8-5240		90EF-1546B4-	47
CMC-8-5210-	FC9638-188	90EF-1546B1-	44
CMC-8-5210-		90EF-X-400F	44
CMC-X-5241-	190103-	90EF-X1488FL4-	35
CMC-8-5250-	FC7554-188	90EF-1546B5-	48
CMC-8-5250-	FC7780-188	90EF-X-150F-B16.5	48
CMC-X-5251-	190124-	90EF-X1488FL5-	36

**PART NUMBER CROSS REFERENCE
CMC® TO AEROQUIP AND HYDRASEARCH**

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

CMC PART NUMBER	AEROQUIP PART NUMBER	HYDRASEARCH PART NUMBER	CMC PAGE #
CMC-8-5300-	FC7754-188	90ELB-X-ER512	49
CMC-8-5300-	FC9528-188	90ELB-1546E-	49
CMC-4-5301-	4-4414-	EF-X1488MF-	50
CMC-X-5311-	190093-	90ELB-X1488D-	38
CMC-4-5401-	4-412-	EF-X1488MP-	51
CMC-4-5402-	4-4722-	EF-X1600MP-	5
CMC-4-5403-	4-4729-	EF-X1602MP-	12
CMC-4-5501-	4-4411-	EF-X1488ACR-	25
CMC-4-5502-	4-4721-	EF-X1600A-	6
CMC-4-5503-	4-4730-	EF-1602A-	13
CMC-4-5504-	4-190933-		17
CMC-4-5505-	4-4741-		54
CMC-4-5511-	4-411-	EF-X1488C-	52
CMC-4-5601-	4-190911-	EF-X1488C-	24
CMC-4-5602-	4-190909-	EF-1600C-	7
CMC-4-5603-	4-190885-	EF-1602C-	14
CMC-4-5604-	4-191023-		18
CMC-4-5701-	4-191301-	90EF-1488CL-	26
CMC-4-5702-	4-191304-	90EF-1600CL-	8
CMC-4-5703-	4-191307-	90EF-1602CL-	15
CMC-4-5801-	4-191302-	90ELB-1488D-	37
CMC-4-5802-	4-191305-	90ELB-1600D-	9
CMC-4-5803-	4-191308-	90ELB-1602D-	16
CMC-4-5901-	FC7100-4	EF-1489A-	20
CMC-4-5902-	FC7180-4	EF-1489C-	21
CMC-4-5903-	FC7182-4	90EF-1489CL-	22
CMC-4-5904-	FC7183-4	90ELB-1489D-	23
CMC-X-5N01-(SIZE)-SHORT	190261-		53
CMC-X-6020-	190600-		
CMC-X-7020-	190535-		
CMC-X-7060-	FC5307-		
CMC-X-7155-	FC7862-		
CMC-41-8130-	41-191316-		
CMC-41-8150-	41-191313-		

**PART NUMBER CROSS REFERENCE
CMC® TO AEROQUIP AND HYDRASEARCH**

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

CMC PART NUMBER	AEROQUIP PART NUMBER	HYDRASEARCH PART NUMBER	CMC PAGE #
CMC-41-8160-	41-191314-		
CMC-514-8220-	FJ9364-41		
CMC-51-8230-	FJ9366-41		
CMC-514-8250-	FJ9368-41		
CMC-51-8260-	FJ9343-41		
CMC-51-8260-	FJ9637-41		
N2826-	FC133-	HS133-	71
This section of fittings is using Size -16 (1") as an example, but can be made in various size combinations:			
CMC-X-16B-16C	2022-16-16	8636-	
CMC-X-16C-16A	2021-16-16	8638-	
CMC-X-16C-16C	2027-16-16	8641-	
CMC-X-16C-16G	202702-16-16	6728-	
CMC-X-16C-1-FS/B	202240-1-16	8640-	65
CMC-X-16C-1-FS/W	202232-1-16	4238-	70
CMC-X-16C-1-FSB/FF	202204-1-16		69
CMC-X-16C-1-FSB/W	202242-1-16	8635-	68
CMC-X-16C-1-MS/B	202140-1-16	8651-	66
CMC-X-16C-1-MS/W	202142-1-16	4307-	67
CMC-X-16FC-20C	2215-16-20	8637-	
CMC-X-16FS-12C	221501-16-12	8639-	



PART NUMBER CROSS REFERENCE AEROQUIP TO CMC®

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

AEROQUIP PART NUMBER	CMC PART NUMBER	CMC PAGE #
190016-	CMC-X-5141-	30
190093-	CMC-X-5311-	38
190103-	CMC-X-5241-	35
190109-	CMC-X-5151-	31
190124-	CMC-X-5251-	36
190261-	CMC-X-5N01-(SIZE)-SHORT	53
190535-	CMC-X-7020-	
190600-	CMC-X-6020-	
190885-	CMC-X-5603-	14
190909-	CMC-X-5602-	7
190911-	CMC-X-5601-	24
190933-	CMC-X-5504-	17
191023-	CMC-X-5604-	18
191301-	CMC-X-5701-	26
191302-	CMC-X-5801-	37
191304-	CMC-X-5702-	8
191305-	CMC-X-5802-	9
191307-	CMC-X-5703-	15
191308-	CMC-X-5803-	16
191313-	CMC-X-8150-	
191314-	CMC-X-8160-	
191316-	CMC-X-8130-	

NOTE:
Looking for a Custom Hydraulic equivalent to a Aeroquip item that is not on this list, please contact: Sales@CustomHydraulic.com to confirm if we manufacture a CMC equivalent.

This section of fittings is using Size -16 (1") as an example, but can be made in various size combinations:

2021-16-16	CMC-X-16C-16A	
202140-16-16	CMC-X-16C-1-MS/B	66
202142-1-16	CMC-X-16C-1-MS/W	67
2022-16-16	CMC-X-16B-16C	
202204-1-16	CMC-X-16C-1-FSB/FF	69
202232-1-16	CMC-X-16C-1-FS/W	70
202240-1-16	CMC-X-16C-1-FS/B	65
202242-1-16	CMC-X-16C-1-FSB/W	68
2027-16-16	CMC-X-16C-16C	
202702-16-16	CMC-X-16C-16G	
2215-16-16	CMC-X-16C-20FC	
221501-16-16	CMC-X-16FS-12C	

PART NUMBER CROSS REFERENCE AEROQUIP TO CMC®

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

AEROQUIP PART NUMBER	CMC PART NUMBER	CMC PAGE #
411-	CMC-X-5511-	52
412-	CMC-X-5401-	51
4411-	CMC-X-5501-	25
4414-	CMC-X-5301-	50
4721-	CMC-X-5502-	6
4722-	CMC-X-5402	5
4729-	CMC-X-5403-	12
4730-	CMC-X-5503-	13
4741-	CMC-X-5505-	54
FC133-	N2826-	71
FC5048-	CMC-X-5150-	43
FC5188-	CMC-X-5130-	41
FC5307-	CMC-X-7060-	
FC5309-	CMC-X-5140-	42
FC7100-	CMC-X-5901-	20
FC7180-	CMC-X-5902-	21
FC7182-	CMC-X-5903-	22
FC7183-	CMC-X-5904-	23
FC7554-	CMC-X-5250-	48
FC7750-	CMC-X-5120-	40
FC7751-	CMC-X-5220-	45
FC7754-	CMC-X-5300-	49
FC7780-	CMC-X-5250-	48
FC7781-	CMC-X-5150-	43
FC7862-	CMC-X-7155-	
FC9056-	CMC-X-5102-	10
FC9224-	CMC-X-5202-	11
FC9527-	CMC-X-5120-	40
FC9528-	CMC-X-5300-	49
FC9568-	CMC-X-5110-	39
FC9637-	CMC-X-5220-	45
FC9638-	CMC-X-5210-	44
FF9700-64-262	CMC-SC-1-004	55
FF9700-80-262	CMC-SC-1-005	55

**PART NUMBER CROSS REFERENCE
AEROQUIP TO CMC®**

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

AEROQUIP PART NUMBER	CMC PART NUMBER	CMC PAGE #
FF9700-96-262	CMC-SC-1-006	55
FF9700-128-262	CMC-SC-1-008	55
FF9700-160-262	CMC-SC-1-010	55
FF9700-192-262	CMC-SC-1-012	55
FJ9343-	CMC-X-8260-	
FJ9364-	CMC-X-8220-	
FJ9366-	CMC-X-8230-	
FJ9368-	CMC-X-8250-	
FJ9637-	CMC-X-8290-	
FJ9832-	CMC-X-5131-	29
FJ9833-	CMC-X-5231-	34
FJ9838-	CMC-X-5230-	46
FJ9840-	CMC-X-5240-	47



**PART NUMBER CROSS REFERENCE
HYDRASEARCH TO CMC®**

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

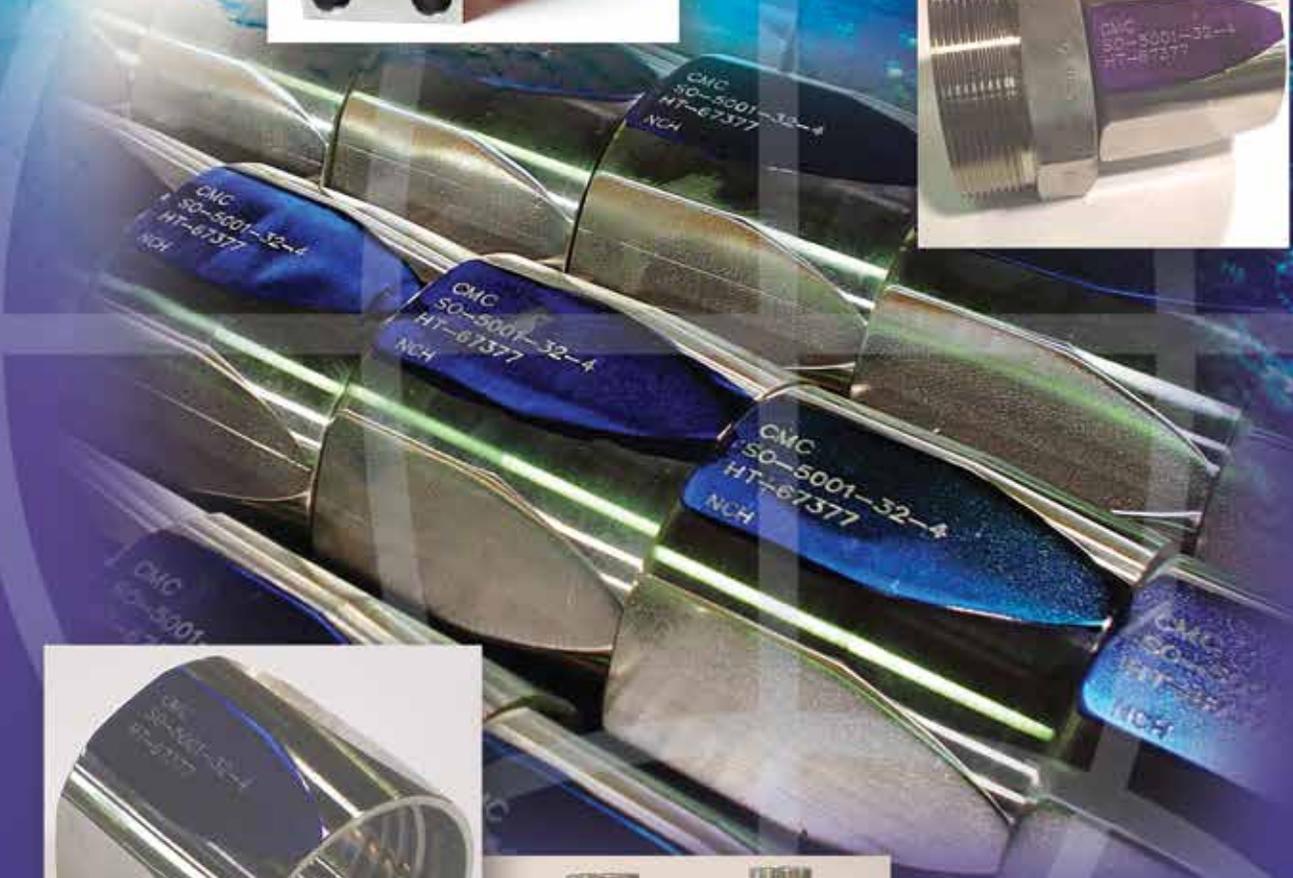
HYDRASEARCH PART NUMBER	CMC PART NUMBER	CMC PAGE #
90EF-1488CL-	CMC-X-5701-	26
90EF-1489CL-	CMC-X-5903-	22
90EF-1546B1-	CMC-X-5210-	44
90EF-1546B2-	CMC-X-5220-	45
90EF-1546B3-	CMC-X-5230-	46
90EF-1546B4-	CMC-X-5240-	47
90EF-1546B5-	CMC-X-5250-	48
90EF-1600B5-	CMC-X-5202-	11
90EF-1600CL-	CMC-X-5702-	8
90EF-1602CL-	CMC-X-5703-	15
90EF-X1488FL3-	CMC-X-5231-	34
90EF-X1488FL4-	CMC-X-5241-	35
90EF-X1488FL5-	CMC-X-5251-	36
90EF-X-150F-B16.5	CMC-X-5250-	48
90EF-X-150/F-	CMC-X-5240-	47
90EF-X-150/400F-	CMC-X-5220-	45
90EF-X-250/F-	CMC-X-5230-	46
90EF-X-400/F-	CMC-X-5210-	44
90ELB-1488D-	CMC-X-5801-	37
90ELB-1489D-	CMC-X-5904-	23
90ELB-1600D-	CMC-X-5802-	9
90ELB-1602D-	CMC-X-5803-	16
90ELB-X1488D-	CMC-X-5311-	38
90ELB-X-ER512-	CMC-X-5300-	49
EF-1489A-	CMC-X-5901-	20
EF-1489C-	CMC-X-5902-	21
EF-1546A1-	CMC-X-5110-	39
EF-1546A2-	CMC-X-5120-	40
EF-1546A3-	CMC-X-5130-	41
EF-1546A4-	CMC-X-5140-	42
EF-1546A5-	CMC-X-5150-	43
EF-1600A5-	CMC-X-5102-	10
EF-1600C-	CMC-X-5602-	7
EF-1602A-	CMC-X-5503-	13

NOTE:
Looking for a Custom Hydraulic equivalent to a Hydrasearch item that is not on this list, please contact: Sales@CustomHydraulic.com to confirm if we manufacture a CMC equivalent.

PART NUMBER CROSS REFERENCE HYDRASEARCH TO CMC

"X" IS MATERIAL DESIGNATOR, SEE PAGE 3 • FOR SIZES AFTER DASH, SEE PAGE 3

HYDRASEARCH PART NUMBER	CMC PART NUMBER	CMC PAGE #
EF-1602C-	CMC-X-5603-	14
EF-X1488ACR-	CMC-X-5501-	25
EF-X1488C-	CMC-X-5601-	29
EF-X1488F3-	CMC-X-5131-	31
EF-X1488F4-	CMC-X-5141-	30
EF-X1488F5-	CMC-X-5151-	31
EF-X1488MF-	CMC-X-5301-	50
EF-X1488MP	CMC-X-5401-	51
EF-X-150/400F	CMC-X-5120-	40
EF-X-150F-B16.5-	CMC-X-5150-	43
EF-X1600A-	CMC-X-5502-	6
EF-X1600MP-	CMC-X-5402-	5
EF-X1602MP-	CMC-X-5403-	12
EF-X1488A-	CMC-X-5511-	52
HS133-	N2826-	71
ISS-64	CMC-SC-1-004	55
ISS-80	CMC-SC-1-005	55
ISS-96	CMC-SC-1-006	55
ISS-128	CMC-SC-1-008	55
ISS-160	CMC-SC-1-010	55
ISS-192	CMC-SC-1-012	55
This section of fittings is using Size -16 (1") as an example, but can be made in various size combinations:		
4238-	CMC-X-16C-1-FS/W	70
4307-	CMC-X-16C-1-MS/W	67
6728-	CMC-X-16C-16G	
8635-	CMC-X-16C-1-FSB/W	68
8636-	CMC-X-16B-16C	
8637-	CMC-X-16C-20FC	
8638-	CMC-X-16C-16A	
8639-	CMC-X-16FS-12C	
8640-	CMC-X-16C-1-FS/B	65
8641-	CMC-X-16C-16C	
8651-	CMC-X-16C-1-MS/B	66



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Kent Operations Office
22911 86th Avenue South
Kent, Washington 98031
Phone: 253-854-4666
Fax: 253-854-4674
sales@customhydraulic.com
www.customhydraulic.com

 twitter.com/customhydraulic

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