

# WEIR CONCEPTS INC.

## PRODUCT GUIDE

### - WC-CF SERIES PNEUMATIC ACTUATOR -



**EXPECT QUALITY AND RELIABILITY**

**using our brand name CF SERIES PNEUMATIC ACTUATOR**



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CANADA T6E 5B2

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www.weirconcepts.com

**MADE IN ALBERTA, CANADA PRODUCTS**

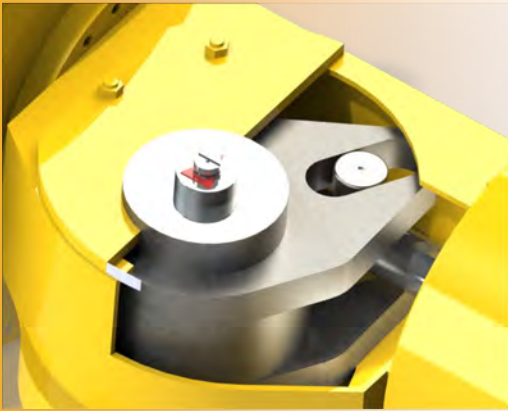
Manufactured and assembled at our Edmonton based facility

**DETAILS ARE THE DIFFERENCE BETWEEN ORDINARY AND EXCELLENCE**

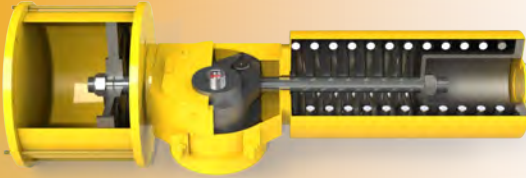
## BODY



## INTERNAL BODY PARTS



## CYLINDER



## SPRING MODULE



# CF SERIES DESIGN & CONSTRUCTION

Internal O-ring to ensure water ingress protection.

NUMUR standard for all sizes for assembly of switch boxes and positioners.

Front and rear threaded components for easy assembly of a pneumatic control panel.

Round rolled used for reducing friction between the yoke arm and pin, minimizing the wear.

Replaceable bearings protect the sliding and rotating components. Suitable for dry or lubricated working conditions.

PTFE thrust bar prevents yoke pin axial movement, transferring axial loads directly to the drive module case.

Connects the piston rod with the guide block, compensating for side load deflection and reducing wear on rod, bearings, and seats.

**CYLINDER** The inner surface of the cylinder is coated by PTFE to prevent resistance and self-lubricating.

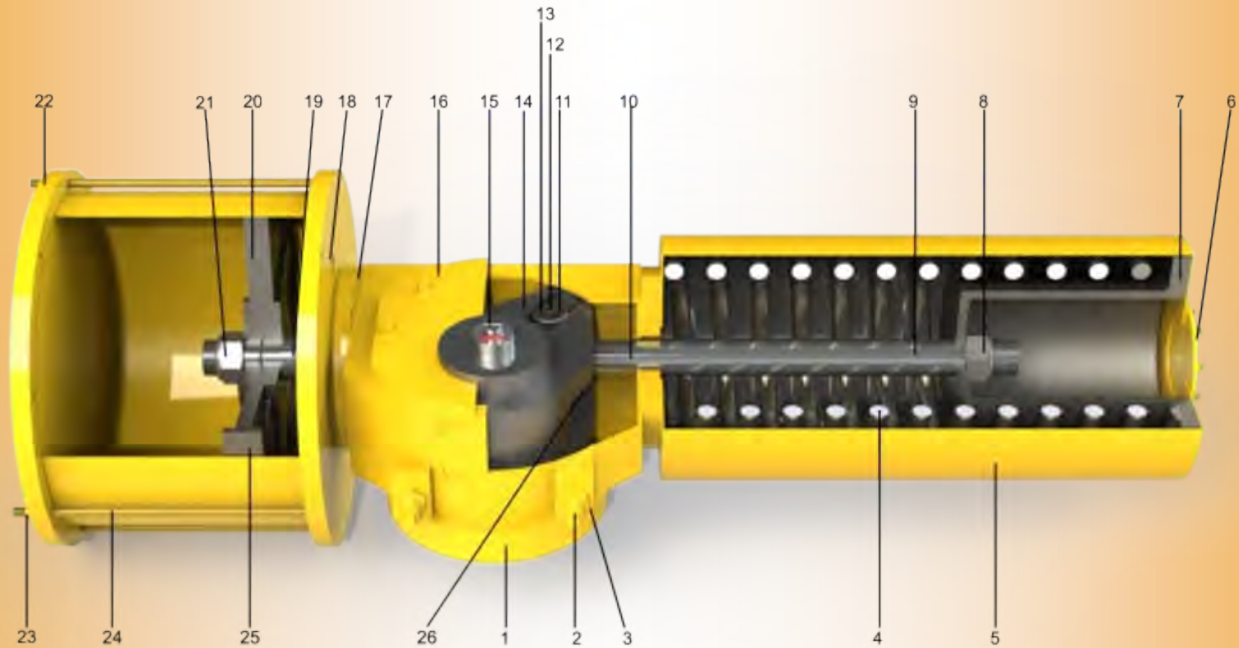
**PISTONS SEALS** Double sealing with O-ring and dynamic ring to prevent metal on metal contact between the piston and the cylinder.

Safe spring lock prevents spring module detachment from the drive module.

Internal hydraulic cylinder for manual pump override.

## Weir Concepts at work for you

## CF SERIES PARTS & MATERIAL



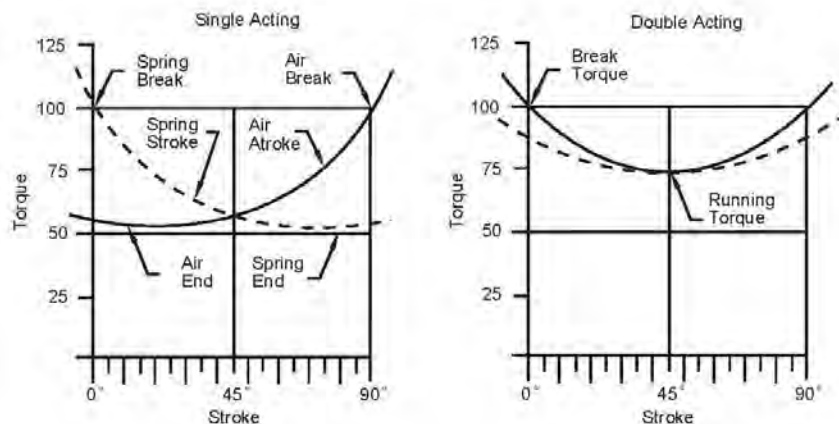
No.	Name	Material
1	Body	Ductile Iron
2	Adjust Stud	Alloy Steel
3	Nut	2H
4	Spring	Alloy Steel
5	Spring Case	Carbon Steel
6	Cover Plate	Carbon Steel
7	Spring Seat	Carbon Steel
8	Nut	2H
9	Tension Rod	Alloy Steel
10	Sliding Bearing	Metal +TFE
11	Roller	Alloy Steel
12	Slider Bearing	Metal +TFE
13	Pin	Alloy Steel
14	Yoke	Carbon Steel
15	Drive Shaft	Alloy Steel
16	Body Cap	Ductile Iron
17	Bolting	Carbon Steel
18	Adapter plate	Ductile Iron
19	O ring	NBR
20	Piston	Ductile Iron
21	Nut	2H
22	End Cap	Ductile Iron
23	Nut	2H
24	Body Screw	Alloy Steel
25	Oring seals	NBR
26	Guide Block	Ductile Iron

**Solutions for your  
company needs**



# CF SERIES OUTPUT TORQUE

**Solutions for your  
company needs**



**Double Acting Unit: in-lb**

All Torques listed below in-lb

Model	Max Torque of Drive Module	Air Pressure									
		45 psig		60psig		75psig		87psig		100psig	
		Break	Run	Break	Run	Break	Run	Break	Run	Break	Run
CF14-200	17701	7346	4461	9798	5948	12249	7426	14692	8913	17144	10400
CF14-250		11488	6966	15312	9284	19144	11612				
CF14-300		16471	9992								
CF16-250	35403	14356	8709	19144	11612	23932	14515	28721	17418	33509	20321
CF16-300		20675	12541	27570	16719	34465	20905				
CF16-350		28145	17073	37527	22764						
CF25-350	70806	34748	21074	46333	28101	57910	35128	69496	42156		
CF25-400		44112	26756	58822	35677	73523	44599				
CF25-450		55839	33872	74452	45165						
CF30-450	141611	68239	41395	90985	55193	111342	67540	136478	82789		
CF30-500		84250	51104	112342	68150	140425	85188				
CF30-550		101951	61849	135938	82462						
CF35-550	283222	129751	78709	173005	104952	216249	131185	259503	157427	302756	183670
CF35-600		154418	93676	205894	124901	257361	156126	308836	187360		
CF35-700		210186	127512	280249	170013						
CF40-600	557594					312518	189591	375031	227516	437534	265432
CF40-700				340301	206443	425382	258060	510455	309668	595528	361286
CF40-800		333353	202230	444473	357267	555594	337052				
CF48-800	1106338					653642	396538	784376	475849	915100	555160
CF48-900				661811	401494	827257	501861	992712	602237	1158167	702613
CF48-1000		612796	371756	817061	495683	1021327	619602				
CF60-800	2212675							1058907	642402	1235390	749468
CF60-900				893452	542026	1116808	677530	1340173	813034	1563538	948538
CF60-1000		827266	501870	1103027	669166	1378780	836453	1654541	1003749	1930293	1171036
CF60-1100		1000988	607264	1334659	809689	1668322	1012113	2001984	1214528	2335647	1416953

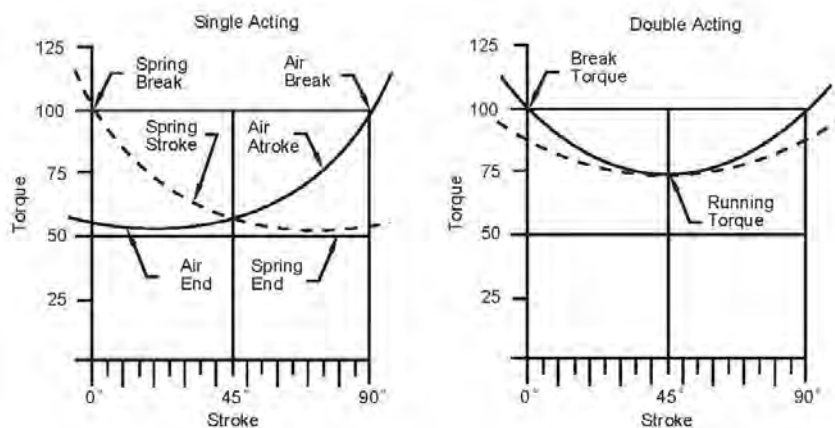
# CF SERIES OUTPUT TORQUE

## Solutions for your company needs

Spring Return Acting

Spring for Air Pressure is 45psi

Unit: in-lb



All Torques listed below in-lb					
Model	Max Torque of Drive Module	Spring break	Spring end	Air break	Air end
CF14-200	17701	4523	2717	4629	2815
CF14-250		6983	4478	7001	4496
CF14-300		9550	5965	10568	6992
CF16-250	35403	9665	5372	8975	4682
CF16-300		12692	7895	12780	7983
CF16-350		16781	10860	17285	11355
CF25-350	70806	19905	13011	20764	13869
CF25-400		26517	16772	27340	16843
CF25-450		35049	22428	33403	20781
CF30-450	141611	42359	25570	42669	25879
CF30-500		53494	31287	52963	30756
CF30-550		60778	38492	63451	41165
CF35-550	283222	81249	47794	81957	48502
CF35-600		97499	56450	97968	56910
CF35-700		127884	78833	131344	82294
CF40-600	557594	116219	71815	115687	71284
CF40-700		144789	90914	164304	110430
CF40-800		189635	120954	212399	143718
CF48-800	1106338	235597	144983	247200	156578
CF48-900		299543	184334	312023	196813
CF48-1000		405265	257529	355267	207522
CF60-800	2212675	325706	201840	316846	192990
CF60-900		417027	246421	423656	253059
CF60-1000		561117	338637	488621	266149
CF60-1100		698126	435605	565392	302862



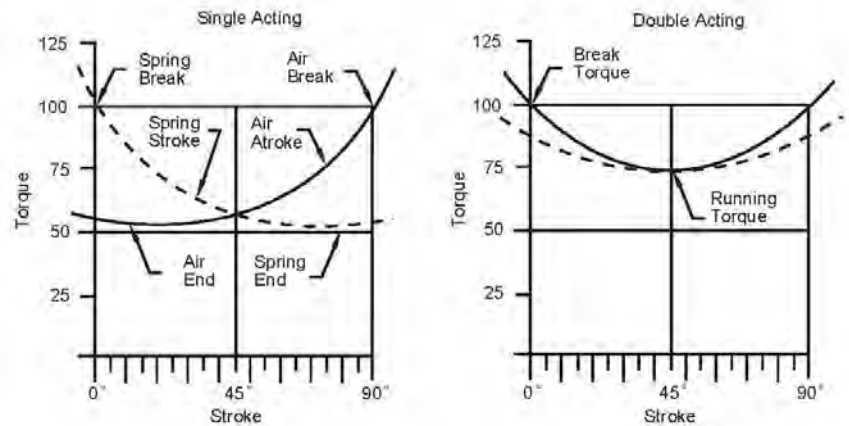
# CF SERIES OUTPUT TORQUE

## Solutions for your company needs

Spring Return Acting

Spring for Air Pressure is 60psi

Unit: in-lb



All Torques listed below in-lb					
Model	Max Torque of Drive Module	Spring break	Spring end	Air break	Air end
CF14-200	17701	6010	3859	5939	3788
CF14-250		9550	5965	9346	5762
CF14-300		13072	8390	13665	8983
CF16-250	35403	11338	7240	11904	7806
CF16-300		16781	10860	16710	10789
CF16-350		22968	14418	23109	14559
CF25-350	70806	26517	16772	28260	18516
CF25-400		35049	22428	36394	23773
CF25-450		43855	26543	47900	30588
CF30-450	141611	56016	33810	57184	34978
CF30-500		70177	43094	69248	42156
CF30-550		82975	51546	84383	52954
CF35-550	283222	108837	66212	106793	64168
CF35-600		127884	78833	127061	78001
CF35-700		168774	102217	178023	111466
CF40-600	557594	144789	90914	159100	105217
CF40-700		189635	120954	219338	150665
CF40-800		265654	166013	278452	178811
CF48-800	1106338	299543	184334	338575	223365
CF48-900		405265	257529	404273	256546
CF48-1000		507570	311545	505508	309491
CF60-800	2212675	417027	246421	459511	288905
CF60-900		561117	338637	554806	332326
CF60-1000		698126	435605	667422	404893
CF60-1100		848702	514907	819752	485957

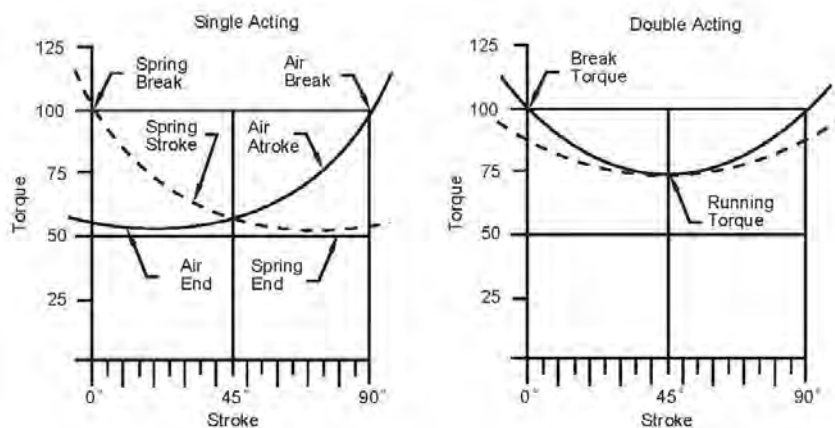
# CF SERIES OUTPUT TORQUE

## Solutions for your company needs

### Spring Return Acting

Spring for Air Pressure is 75psi

Unit: in-lb



All Torques listed below in-lb					
Model	Max Torque of Drive Module	Spring break	Spring end	Air break	Air end
CF14-200	17701	6983	4478	7762	5257
CF14-250		11904	7213	11922	7240
CF14-300		16639	10674	16887	10931
CF16-250	35403	13745	8948	14975	10178
CF16-300		21428	12878	21578	13028
CF16-350		28269	18454	28455	18640
CF25-350	70806	35049	22428	33863	21242
CF25-400		43855	26543	46988	29668
CF25-450		55990	32978	60079	37067
CF30-450	141611	70177	43094	69850	43563
CF30-500		82975	51546	88879	57441
CF30-550		101128	62769	107147	68788
CF35-550	283222	127884	78833	137425	88365
CF35-600		160950	95163	162207	96420
CF35-700		211213	124875	225427	139089
CF40-600	557594	189635	120954	191565	122883
CF40-700		265654	166013	259361	159720
CF40-800		313536	191874	363720	242058
CF48-800	1106338	405265	257529	396113	248377
CF48-900		507570	311545	515721	319696
CF48-1000		616026	377199	644119	405291
CF60-800	2212675	561117	338637	543778	321298
CF60-900		698126	435605	681212	418682
CF60-1000		848702	514907	863873	530077
CF60-1100		994544	635162	1033169	673777



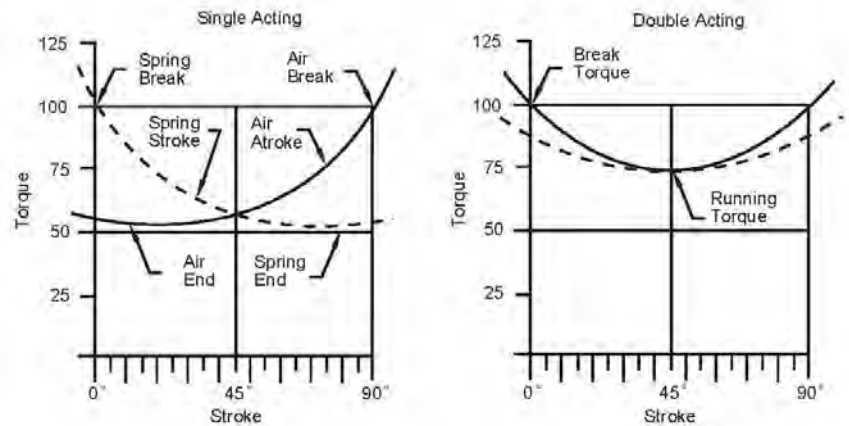
# CF SERIES OUTPUT TORQUE

## Solutions for your company needs

Spring Return Acting

Spring for Air Pressure is 87psi

Unit: in-lb

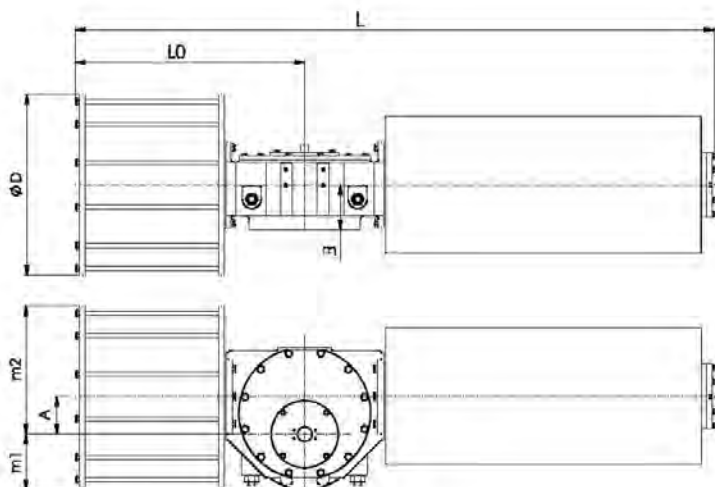


All Torques listed below in-lb					
Model	Max Torque of Drive Module	Spring break	Spring end	Air break	Air end
CF14-200	17701	9099	5514	9178	5602
CF14-250		13072	8390	14586	9895
CF14-300		20277	12904	20180	12807
CF16-250	35403	16781	10860	17861	11931
CF16-300		22968	14418	26942	18383
CF16-350		34146	21649	34642	22144
CF25-350	70806	43855	26543	41005	23693
CF25-400		55990	32978	55255	32243
CF25-450		73116	41775	69894	38562
CF30-450	141611	82975	51546	84949	53511
CF30-500		101128	62769	105872	67380
CF30-550		124618	73850	130052	79276
CF35-550	283222	160950	95163	164349	98561
CF35-600		198884	112546	196300	109961
CF35-700		256254	153011	267353	164119
CF40-600	557594	235694	148940	226082	136929
CF40-700		313536	191874	318581	196910
CF40-800		422550	259326	407389	253068
CF48-800	1106338	507570	311545	472849	276806
CF48-900		616026	377199	615522	376695
CF48-1000		731776	460024	765559	493807
CF60-800	2212675	698126	435605	625957	360772
CF60-900		848702	514907	825266	491471
CF60-1000		994544	635162	1019379	659997
CF60-1100					



# CF SERIES SPRING RETURN ACTING DIMENSIONS

Model	Connect Flange	L	L0	m1	m2	A	B	D	Air Port
CF14-200SR4	F14	1105	449	87.5	187.5	60	88	255	RC3/8"
CF14-250 SR4		1105	449	87.5	212.5	60	88	305	RC1/2"
CF14-300 SR4		1125	449	87.5	237.5	60	88	360	RC1/2"
CF16-250 SR4	F16	1289	499	105	222.5	70	92	305	RC1/2"
CF16-300 SR4		1289	499	105	247.5	70	92	360	RC1/2"
CF16-350 SR4		1318	499	105	272.5	70	92	415	RC1/2"
CF25-350 SR4	F25	1576	556	150	292.5	90	104	415	RC1/2"
CF25-400 SR4		1576	556	150	317.5	90	104	465	RC3/4"
CF25-450 SR4		1674	556	150	350	90	104	520	RC3/4"
CF30-450 SR4	F30	1807	662	175	370	110	130	520	RC3/4"
CF30-500 SR4		1807	662	175	395	110	130	570	RC3/4"
CF30-550 SR4		1807	662	175	420	110	130	620	RC3/4"
CF35-550 SR4	F35	2005	817	207.5	450	140	165	620	RC3/4"
CF35-600 SR4		2005	817	207.5	450	140	165	670	RC1"
CF35-700 SR4		2005	817	207.5	475	140	165	770	RC1"
CF40-600 SR4	F40	2695	960	237.5	505	170	200	670	RC1"
CF40-700 SR4		2695	960	237.5	555	170	200	770	RC1"
CF40-800 SR4		2695	960	237.5	607.5	170	200	875	RC1.1/2"
CF48-800 SR4	F48	3395	1130	280	637.5	200	210	875	RC1.1/2"
CF48-900 SR4		3395	1130	280	687.5	200	210	975	RC2"
CF48-1000SR4		3585	1130	280	787.5	200	210	1075	RC2"
CF60-800 SR4	F60	4185	1380	343	707.5	270	230	875	RC1.1/2"
CF60-900 SR4		4185	1380	343	757.5	270	230	975	RC2"
CF60-1000 SR4		4750	1380	343	807.5	270	230	1075	RC2"
CF60-1100 SR4		4750	1380	343	857.5	270	230	1175	RC2"



## Spring Return Acting

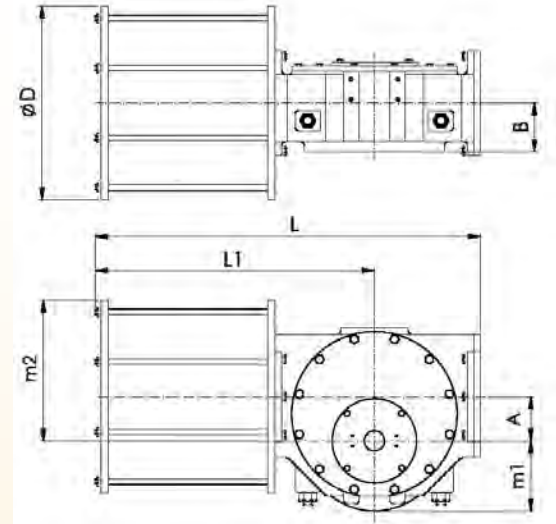
Dimension above chart are only for the spring return actuators.

Spring size is 4Bar (60psi)

**For more information contact our tech support (780.462.1910)**

# CF SERIES SPRING RETURN ACTING DIMENSIONS

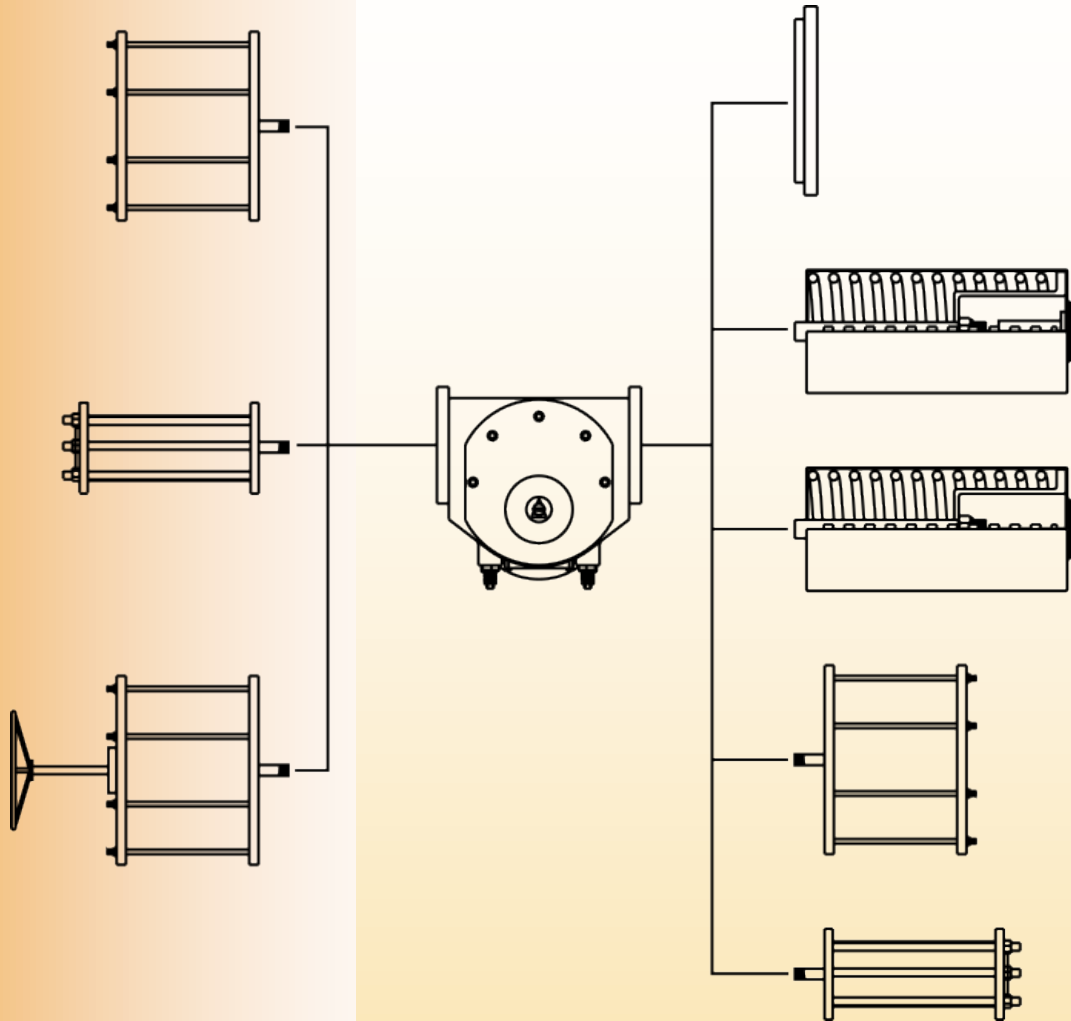
**Solutions for your  
company needs**



Model	Connect Flange	L	L1	m1	m2	A	B	D	Air Port
CF14-200DA	F14	594	449	87.5	187.5	60	88	255	RC3/8"
CF14-250 DA		594	449	87.5	212.5	60	88	305	RC1/2"
CF14-300 DA		594	449	87.5	237.5	60	88	360	RC1/2"
CF16-250DA	F16	679	499	105	222.5	70	92	305	RC1/2"
CF16-300DA		679	499	105	247.5	70	92	360	RC1/2"
CF16-350DA		679	499	105	272.5	70	92	415	RC1/2"
CF25-350DA	F25	766	556	150	292.5	90	104	415	RC1/2"
CF25-400DA		766	556	150	317.5	90	104	465	RC3/4"
CF25-450DA		766	556	150	350	90	104	520	RC3/4"
CF30-450DA	F30	922	662	175	370	110	130	520	RC3/4"
CF30-500DA		922	662	175	395	110	130	570	RC3/4"
CF30-550DA		922	662	175	420	110	130	620	RC3/4"
CF35-550DA	F35	1130	817	207.5	450	140	165	620	RC3/4"
CF35-600DA		1130	817	207.5	450	140	165	670	RC1"
CF35-700DA		1130	817	207.5	475	140	165	770	RC1"
CF40-600DA	F40	1320	960	237.5	505	170	200	670	RC1"
CF40-700 DA		1320	960	237.5	555	170	200	770	RC1"
CF40-800 DA		1320	960	237.5	607.5	170	200	875	RC1. 1/2"
CF48-800 DA	F48	1580	1130	280	637.5	200	210	875	RC1. 1/2"
CF48-900 DA		1580	1130	280	687.5	200	210	975	RC2"
CF48-1000DA		1580	1130	280	787.5	200	210	1075	RC2"
CF60-800 DA	F60	1960	1380	343	707.5	270	230	875	RC1. 1/2"
CF60-900 DA		1960	1380	343	757.5	270	230	975	RC2"
CF60-1000 DA		1960	1380	343	807.5	270	230	1075	RC2"
CF60-1100 DA		1960	1380	343	857.5	270	230	1175	RC2"



# CF SERIES - Your Guide for Placing Orders



- 1. Body Size. : SF14 to SF60
- 2. Cylinder Size : 200 to 1100
- 3. Acting Type  
DA : Double Acting  
SA : Single Acting
- 4. Spring Size:  
3 : 3Bar    4 : 4Bar  
5 : 5Bar    6 : 6Bar

- 5. Temperature:  
LT : Low temperature (-45~80°C)  
HT : High temperature (20~120°C)
- 6. Special Code (Selective) :  
H : Jack Screw Manual Override  
EX : Extended Travel Stop  
HY : Hydraulic Override

- 7. Air failure (Single acting)  
STC : Spring to close  
STO : Spring to open

# PRODUCT GUIDE

## WEIR CONCEPTS WC-CF SERIES PNEUMATIC ACTUATOR



## SOLUTIONS FOR YOUR COMPANY NEEDS

### - HELP DESK -

FOR YOUR SUPPORT AND SERVICE

**24 hours a day, 7 days a week**

**NO CHARGE ON CALLS SERVICE**

We offer technical assistance, product knowledge, and reliable trouble shooting

Brochures/Maintenance info available online [www.weirconcepts.com](http://www.weirconcepts.com)

**HELP DESK EXPERTISE PROVIDED AT WEIR CONCEPTS**

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Version 3.0

