

# 28-1 & 29 Series

Compact, Light Weight  
Non-Spill Couplings



## Compact Couplings for Applications Requiring Minimal Air Inclusion or Spillage

Both 28-1 and 29 Series are non-spill, push-to-connect couplings designed to fit in confined spaces. Their small envelope size and aluminum material option results in a compact, lightweight connection.

The non-spill valving has minimal spillage and air inclusion while providing maximum flow with low pressure drop.

The 28-1 Series is rated for pressures up to 1000 psi (69 bar) and is available in 1/4"-2" body sizes. The 29 Series is rated for pressures up to 5500 psi (379 bar) and is available in 1/8"-1-1/4" body sizes. Both products have stainless steel and aluminum material options.



**28-1 Series**  
for pressures to 1000 psi (69 bar)

**29 Series**  
for pressures to 5500 psi (379 bar)

## Contact Information:

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## 28-1 Series Features:

- Low pressure drop
- Push-to-connect
- 1/4" - 2" size range
- Lightweight compact design
- Wide range of seal materials
- Aluminum or stainless construction
- Visual indicator confirms full connection

## 29 Series Features:

- Low pressure drop
- Push-to-connect
- 1/8" - 1-1/4" size range
- High pressure design
- Wide range of seal materials
- Aluminum or stainless construction



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## 28-1 Series Performance Data



### Typical Applications Include:

- Low pressure hydraulic systems
- High purity systems
- Fuel systems
- Cooling systems for electronics

### Pressure Ratings

Size	Aluminum		Stainless Steel	
	Working Pressure		Working Pressure	
	PSI	Bar	PSI	Bar
1/4"	1000	69	1000	69
3/8"	1000	69	1000	69
1/2"	1000	69	1000	69
5/8"	1000	69	1000	69
3/4"	1000	69	1000	69
1"	1000	69	1000	69
1-1/4"	600	41	600	41
1-1/2"	600	41	600	41
2"	600	41	600	41

Pressure ratings were established under static pressure conditions. Therefore, pressure ratings for any given flow, pressure surge and/or vibration may vary these ratings.

Proof pressure = 1.5 x working pressure

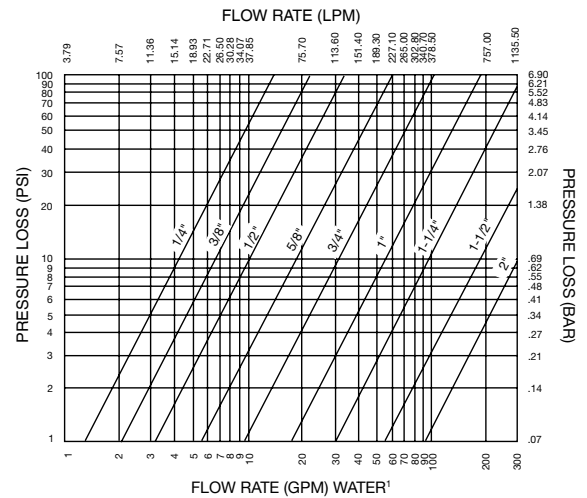
Burst pressure = 2.5 x working pressure

### 28-1 Series Dimensions and Weights

Size	Coupler								Connected Length		Nipple					
	A		D		E		Weight		Length		B		F		Weight	
	in	mm	in	mm	in	mm	lb	g	in	mm	in	mm	in	mm	lb	g
1/4"	1.25	31.75	.88	22.35	.75	19.05	.05	22.68	1.80	45.72	1.10	27.94	.75	19.05	.02	4.54
3/8"	1.44	36.58	1.12	28.45	1.00	25.40	.11	49.90	2.02	51.31	1.20	30.48	1.00	25.40	.05	9.07
1/2"	1.61	40.89	1.34	34.04	1.13	28.70	.17	77.11	2.15	54.61	1.25	31.75	1.13	28.70	.06	27.22
5/8"	1.70	43.18	1.58	40.13	1.38	35.05	.23	104.33	2.45	62.23	1.50	38.10	1.38	35.05	.14	63.50
3/4"	2.05	52.07	1.80	45.72	1.50	38.10	.36	163.29	2.89	73.41	1.71	43.43	1.50	38.10	.15	68.04
1"	2.70	68.58	2.32	58.93	2.00	50.80	.74	335.66	3.72	94.49	2.19	55.63	2.00	50.80	.29	131.54
1-1/4"	2.56	65.02	2.63	66.80	2.25	57.15	.76	344.73	3.51	89.15	2.16	54.86	2.25	57.15	.30	136.08
1-1/2"	3.03	76.96	2.96	75.18	2.63 <sup>†</sup>	66.80 <sup>†</sup>	1.33	603.28	3.75	95.25	2.16	54.86	2.63 <sup>†</sup>	66.80 <sup>†</sup>	.33	149.69
2"	3.55	90.17	3.92	99.57	3.25 <sup>†</sup>	82.55 <sup>†</sup>	1.97	893.58	4.73	120.14	2.84	72.14	3.25 <sup>†</sup>	82.55 <sup>†</sup>	.36	163.29

<sup>†</sup>Weights are for aluminum. For Stainless Steel multiply aluminum weight by 2.7. All dimensions and weights are for reference only and are subject to change without notice. Dimension tolerances: A, B, D, E & F ± .03 in. (.76 mm); Connected length ± .06 in. (± 1.52 mm). <sup>††</sup>Two wrench flats.

### Pressure Loss vs. Flow



<sup>1</sup> Pressure loss vs. flow is in water with specific gravity of 1.0. For fluids with sg of .85 multiply by 1.58; for fluids with sg of .83 multiply by 1.60. Temperature 100°F (55°C).  
**NOTE:** Gallon shown are in U.S. gallons.

### Air Inclusion on Connect, Spillage on Disconnect

Size	Air Inclusion*		Spillage	
	in <sup>3</sup>	cc	in <sup>3</sup>	cc
1/4"	.003	.05	.001	.01
3/8"	.011	.18	.002	.03
1/2"	.017	.28	.002	.04
5/8"	.019	.31	.008	.13
3/4"	.029	.48	.009	.15
1"	.049	.80	.018	.30
1-1/4"	.096	1.57	.024	.40
1-1/2"	.122	2.00	.043	.70
2"	.183	3.00	.061	1.00

\***NOTE:** Air inclusion at 0 psi (0 bar) internal pressure; spillage at 15 psi (1 bar) internal pressure.

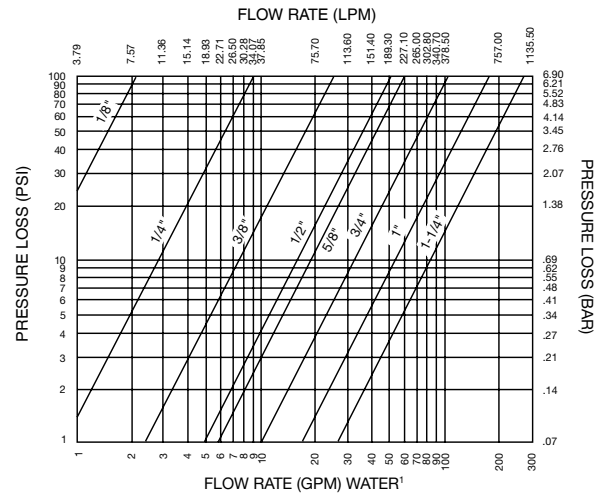
## 29 Series Performance Data



### Typical Applications Include:

- High pressure hydraulic systems
- High purity systems
- Fuel systems
- Cooling systems for electronics

### Pressure Loss vs. Flow



<sup>1</sup> Pressure loss vs. flow is in water with specific gravity of 1.0. For fluids with sg of .85 multiply by 1.58; for fluids with sg of .83 multiply by 1.60. Temperature 100°F (55°C).  
**NOTE:** Gallon shown are in U.S. gallons.

### Pressure Ratings

Size	Aluminum		Stainless Steel	
	Working Pressure		Working Pressure	
	PSI	Bar	PSI	Bar
1/8"	4800	331	5500	379
1/4"	3200	221	3800	262
3/8"	3000	207	3200	221
1/2"	2200	152	3000	207
1/2" x 5/8"	2200	152	3000	207
3/4"	1200	83	2000	138
1"	1000	69	1500	103
1-1/4"	750	52	1000	69

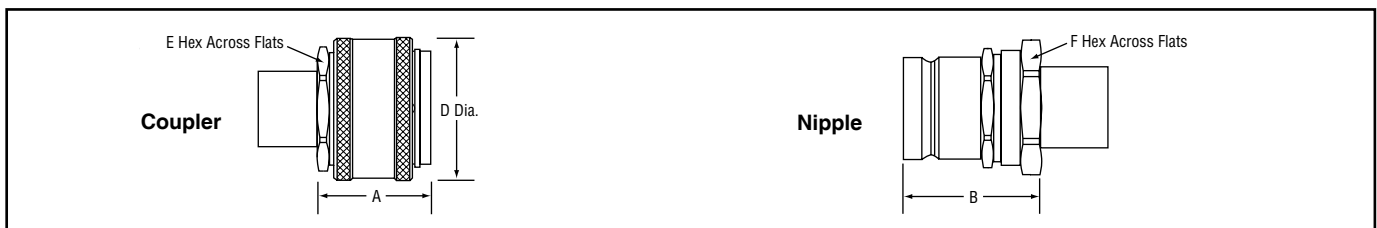
Pressure ratings were established under static pressure conditions. Therefore, pressure ratings for any given flow, pressure surge and/or vibration may vary these ratings.  
 Proof pressure = 1.5 x working pressure  
 Burst pressure = 2.5 x working pressure

### Air Inclusion on Connect, Spillage on Disconnect

Size	Air Inclusion*		Spillage	
	in <sup>3</sup>	cc	in <sup>3</sup>	cc
1/8"	.002	.03	<.001	<.02
1/4"	.002	.03	<.001	<.02
3/8"	.002	.03	<.001	<.02
1/2"	.012	.19	.007	.12
1/2" x 5/8"	.012	.19	.007	.12
3/4"	.008	.13	.005	.08
1"	.008	.13	.005	.09
1-1/4"	.012	.19	.007	.12

\***NOTE:** Air inclusion at 0 psi (0 bar) internal pressure; spillage at 60 psi (4 bar) for 1/8" and 15 psi (1 bar) internal pressure for 1/4" through 1-1/4".

### 29 Series Dimensions and Weights



Size	Coupler								Connected Length		Nipple					
	A		D		E		Weight				B		F		Weight	
	in	mm	in	mm	in	mm	lb	g	in	mm	in	mm	lb	g		
1/8"	1.20	30.48	.88	22.35	.75	19.05	.05	22.68	1.71	43.43	1.07	27.18	.69	17.53	.03	13.61
1/4"	1.31	33.27	1.38	35.05	1.13	28.70	.13	58.97	2.01	51.05	1.30	33.02	1.13	28.70	.07	31.75
3/8"	1.57	39.88	1.63	41.40	1.25	31.75	.20	90.72	2.36	59.94	1.48	37.59	1.38	35.05	.10	45.36
1/2"	1.53	38.86	1.94	49.28	1.50	38.10	.42	190.51	2.64	67.06	1.76	44.70	1.63	41.40	.23	104.33
1/2" x 5/8"	1.53	38.86	1.94	49.28	1.50	38.10	.42	190.51	2.64	67.06	1.76	44.70	1.63	41.40	.23	104.33
3/4"	1.89	48.01	2.35	59.69	1.88	47.75	.49	222.26	2.81	71.37	2.09	53.09	1.88	47.75	.31	140.61
1"	2.45	62.23	2.44	61.98	2.13	54.10	.70	317.51	3.60	91.44	2.50	63.50	2.13	54.10	.36	163.29
1-1/4"	2.52	64.01	2.88	73.15	2.69 <sup>†</sup>	68.33 <sup>†</sup>	.86	390.09	3.64	95.46	2.90	73.66	2.75 <sup>†</sup>	69.85 <sup>†</sup>	.71	322.05

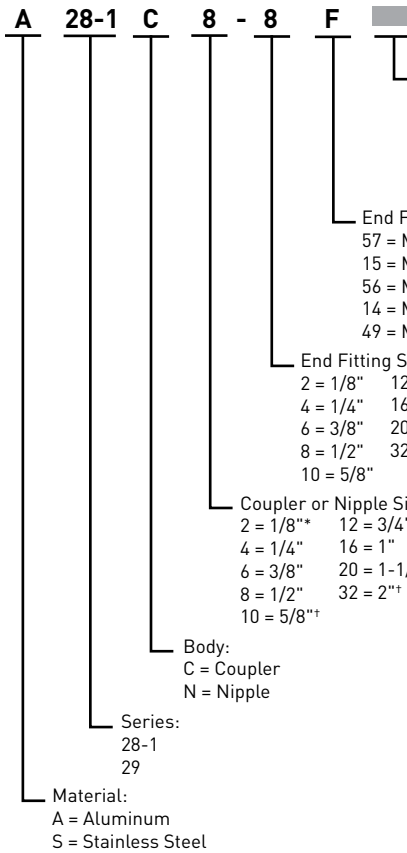
<sup>†</sup>Weights are for aluminum. For Stainless Steel multiply aluminum weight by 2.7. All dimensions and weights are for reference only and are subject to change without notice. Dimension tolerances: A, B, D, E & F ± .03 in. (.76 mm); Connected length ± .06 in. (± 1.52 mm). <sup>††</sup>Two wrench flats.

## 28-1 and 29 Series End Fitting Configurations

Size	G-57		G-EB		Wt. <sup>1</sup>		H		Wt. <sup>1</sup>		J		Wt. <sup>1</sup>		K		Wt. <sup>1</sup>		M		(Max) Wt. <sup>1</sup>		T		Wt. <sup>1</sup>	
	in	mm	in	mm	lb	g	in	mm	lb	g	in	mm	lb	g	in	mm	lb	g	in	mm	lb	g	in	mm	lb	g
1/8"	.95	24.13	1.14	28.96	.01	4.53	.86	21.84	.01	4.53	.45	11.43	.01	4.53	.38	9.65	.01	4.53	.56	14.22	.01	4.53	.38	9.65	.01	4.53
1/4"	1.05	26.67	1.23	31.24	.01	4.53	.97	24.64	.01	4.53	.55	13.97	.01	4.53	.45	11.43	.01	4.53	.78	19.81	.02	9.07	.56	14.22	.01	4.53
3/8"	1.13	28.70	1.31	33.27	.01	4.53	1.02	25.91	.01	4.53	.56	14.22	.01	4.53	.47	11.94	.01	4.53	.88	22.35	.04	18.14	.56	14.22	.01	4.53
1/2"	1.28	32.51	1.47	37.34	.03	13.61	1.16	29.46	.02	9.07	.66	16.76	.01	4.53	.56	14.22	.01	4.53	1.05	26.67	.08	36.29	.75	19.05	.03	13.61
5/8"	1.42	36.07	1.61	40.89	.04	18.14	1.30	33.02	.03	13.61	.76	19.30	.02	9.07	.63	16.00	.02	9.07	1.05	26.67	.11	49.90	—	—	.03	13.61
3/4"	1.59	40.39	1.78	45.21	.06	27.22	1.41	35.81	.05	22.68	.86	21.84	.03	13.61	.69	17.53	.03	13.61	1.40	35.56	.13	58.97	.75	19.05	.03	13.61
1"	1.59	40.39	1.78	45.21	.09	40.82	1.41	35.81	.07	31.75	.91	23.11	.05	22.68	.69	17.53	.03	13.61	1.22	30.99	.19	86.18	.94	23.88	.06	27.22
1-1/4"	1.64	41.66	1.83	46.48	.14	63.50	1.41	35.81	.12	54.43	.96	24.38	.08	36.29	.69	17.53	.06	27.22	1.63	41.40	.29	131.54	.97	24.64	.09	40.82
1-1/2"	1.66	42.16	1.84	46.74	.17	77.11	1.41	28.19	.13	58.97	1.08	27.43	.11	49.90	.69	17.53	.07	31.75	1.65	41.91	.40	181.44	1.00	25.40	.11	49.90
2"	1.94	49.28	2.12	53.85	.21	95.25	1.61	40.89	.19	86.18	1.33	33.78	.15	68.04	.69	17.53	.10	45.36	1.90	48.26	.56	254.01	1.03	26.16	.16	72.57

<sup>1</sup>Weights are for aluminum. For Stainless Steel multiply aluminum weight by 2.7.

### Ordering Information



Seals\*\*:  
 A = Nitrile (AMS 3215)  
 V = Fluorocarbon  
 JF = Nitrile (MIL-P-5315)  
 M = Nitrile (MIL-P-25732)  
 E = Ethylene Propylene

#### End Fitting Type:

57 = MS33657 Bulkhead  
 15 = MS33515 Bulkhead  
 56 = MS33656 37° Male Flare  
 14 = MS33514 Male  
 49 = MS33649 Female

F = Female NPTF  
 RP = Female British Parallel BS 2779  
 M = Male NPT  
 EM = SAE Male 37° Flare  
 EB = SAE Bulkhead

#### End Fitting Size:

2 = 1/8" 12 = 3/4"  
 4 = 1/4" 16 = 1"  
 6 = 3/8" 20 = 1-1/4"  
 8 = 1/2" 32 = 2"  
 10 = 5/8"

#### Coupler or Nipple Size:

2 = 1/8" 12 = 3/4"  
 4 = 1/4" 16 = 1"  
 6 = 3/8" 20 = 1-1/4"  
 8 = 1/2" 32 = 2"  
 10 = 5/8"

Body:  
 C = Coupler  
 N = Nipple

Series:  
 28-1  
 29

Material:  
 A = Aluminum  
 S = Stainless Steel

### 28-1 Series Dust Caps

Size	Coupler	Nipple
1/4"	A28-1DCC-4	A28-1DCN-4
3/8"	A28-1DCC-6	A28-1DCN-6
1/2"	A28-1DCC-8	A28-1DCN-8
5/8"	A28-1DCC-10	A28-1DCN-10
3/4"	A28-1DCC-12	A28-1DCN-12
1"	A28-1DCC-16	A28-1DCN-16
1-1/4"	A28-1DCC-20	A28-1DCN-20
2"	A28-1DCC-32	A28-1DCN-32

Standard Material = Aluminum  
 Replace "A" in part number above with "S" for stainless steel

### 29 Series Dust Caps

Size	Coupler	Nipple	Pressure Cap for Nipple
1/8"	ADP29-2	ADC29-2	APC29-2
1/4"	ADP29-4	ADC29-4	APC29-4
3/8"	ADP29-6	ADC29-6	APC29-6
1/2"	ADP29-8	ADC29-8	APC29-8
3/4"	ADP29-12	ADC29-12	APC29-12
1"	ADP29-16	ADC29-16	APC29-16
1-1/4"	ADP29-20	ADC29-20	APC29-20

\* Available 29 only  
 † Available 28-1 only

\*\* Standard seal in 28-1 Series Nitrile (AMS 3215) - no letter designation required  
 Standard seal in 29 Series Nitrile (MIL-P-25732) - no letter designation required  
 For other seal compounds, consult QCD

**Note:** Not all configurations are standard product offering.  
 Contact QCD for price and delivery.

