

# AIR CYLINDER

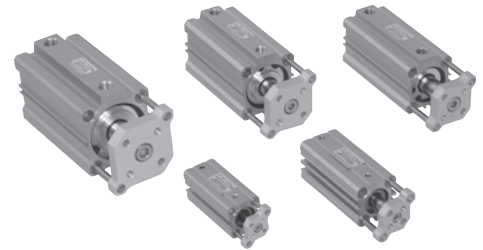
## Series A02G, A02G1, A02G2

Cat No A02G - 01 - 01 - C

### COMPACT CYLINDER WITH GUIDE ROD ( Double Acting - Ø12 to 100mm )

#### Features

- Compact, lightweight and space saving design
- Large clamping force in relation to their size
- Low friction, long life seal design
- Elastomer end cushion
- Load can be directly mounted
- A guide rod is installed to improve lateral load resistance
- Non-Rotating accuracy  $\pm 0.3^\circ$  (or) less



#### Application

These compact cylinders are widely used in low cost automation, SPMs, industrial machinery, Jigs & fixtures etc.

#### Technical Specifications

Model	Compact Cylinder With Guide Rod Type (Seal Type)											
Type	Double Acting Cylinder											
Mountings	Mounting hole / Thread in Barrel											
Mounting orientation	Vertical & Horizontal											
Cylinder bore Ø	mm	12	16	20	25	32	40	50	63	80	100	
Standard strokes*	mm	5, 10, 15, 20, 25, 30, 40		5, 10, 15, 20, 25, 30, 40, 50		5, 10, 15, 20, 25, 30, 40, 50, 60		10, 20, 30, 40, 50, 60, 70, 80				
Medium	Compressed air - filtered - lubricated											
Working pressure range	bar	1.5 to 10			1 to 10							
Medium temperature	C	+5° to +60°										
Ambient temperature	C	-10° to +60°										

\* For Non-standard or longer stroke cylinders, contact your regional dealer or JANATICS H.O.

#### Output force ( force in N : 1N = 0.1 kgf )

Cylinder bore Ø (in mm)	Rod Ø (in mm)		Working pressure in bar								
			2	3	4	5	6	7	8	9	10
12	6	Extend	20	30	40	50	60	70	80	90	100
		Retract	15	22	30	38	46	53	61	68	76
16	8	Extend	36	54	72	90	108	126	144	162	180
		Retract	27	40	54	67	81	95	108	122	135
20	10	Extend	56	84	112	140	169	196	224	254	282
		Retract	42	63	84	106	127	148	169	190	212
25	12	Extend	88	132	176	220	264	308	352	396	440
		Retract	68	102	136	170	204	238	272	306	340
32	16	Extend	145	217	289	362	434	507	579	651	724
		Retract	108	162	217	271	325	380	434	488	542
40	16	Extend	226	339	452	565	678	792	905	1018	1130
		Retract	190	285	380	475	570	665	760	855	950
50	20	Extend	353	530	706	884	1060	1237	1414	1590	1767
		Retract	297	445	594	742	890	1039	1187	1336	1484
63	20	Extend	561	842	1122	1403	1683	1964	2244	2525	2805
		Retract	505	757	1009	1261	1514	1766	2018	2270	2523
80	25	Extend	905	1357	1809	2262	2714	3167	3619	4072	4524
		Retract	816	1225	1633	2041	2449	2857	3266	3674	4082
100	30	Extend	1414	2120	2827	3534	4241	4948	5655	6362	7068
		Retract	1287	1929	2573	3216	3859	4502	5145	5789	6432

\* Integrated guides achieves lateral load resistances & high non-rotating accuracy. (Above values have been worked out taking frictional loss into consideration)

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## Series A02G, A02G1, A02G2

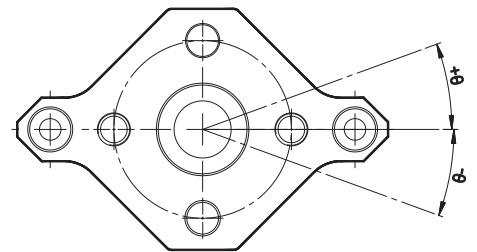
Cat No A02G - 01 - 01 - C

### CAUTION:-

1. **Do not scratch or touch the sliding parts of the piston rod and guide rods.**  
Damage to seals may cause air leakage or faulty operation.
2. **Mounting of work piece**
  - a) When screwing the bolt onto the threaded portion of the plate make sure that the cylinder is in fully extended position. And also see that the tightening torque should not affect the guide rods.
  - b) When a work piece is mounted on the piston rod end or mounting plate, check whether they are aligned center to the work piece and mounting plate. If they are off-centered, the lateral load is generated and it may cause air leakage & damage to the seals.
3. **This product should not be used as a stopper**

### Plate Non - Rotating Accuracy

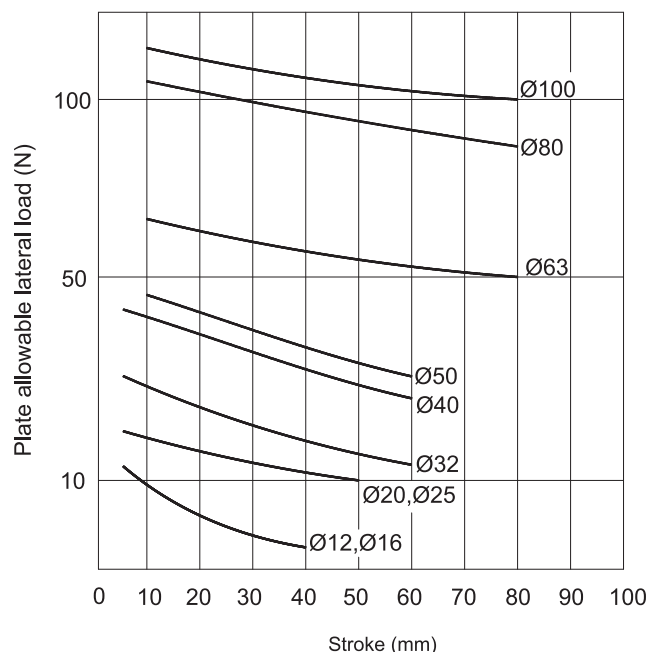
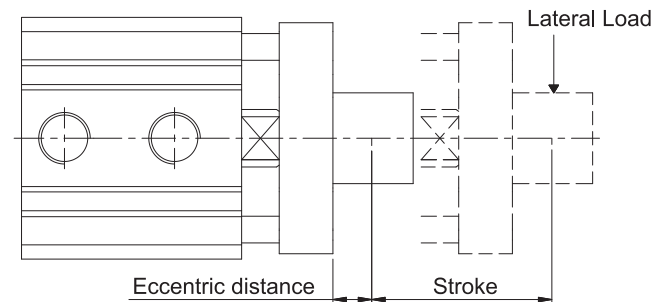
Bore Size Ø (mm)	Non-Rotating Accuracy
12,16	±0.3°
20 to 40	±0.2°
50 to 100	±0.1°



### Plate Allowable Lateral Load

**Make sure to operate strictly within the allowable lateral load range to the plate.**

Operation outside of this range may result in shorter service life or damage to the device.



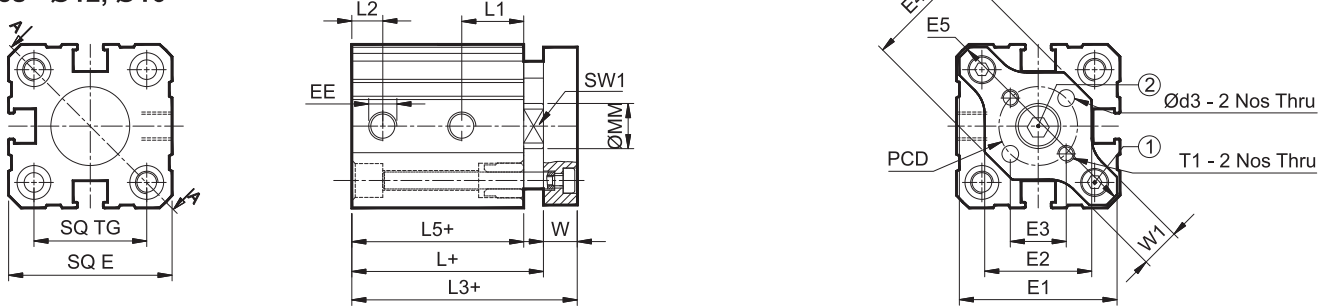
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Series A02G, A02G1, A02G2

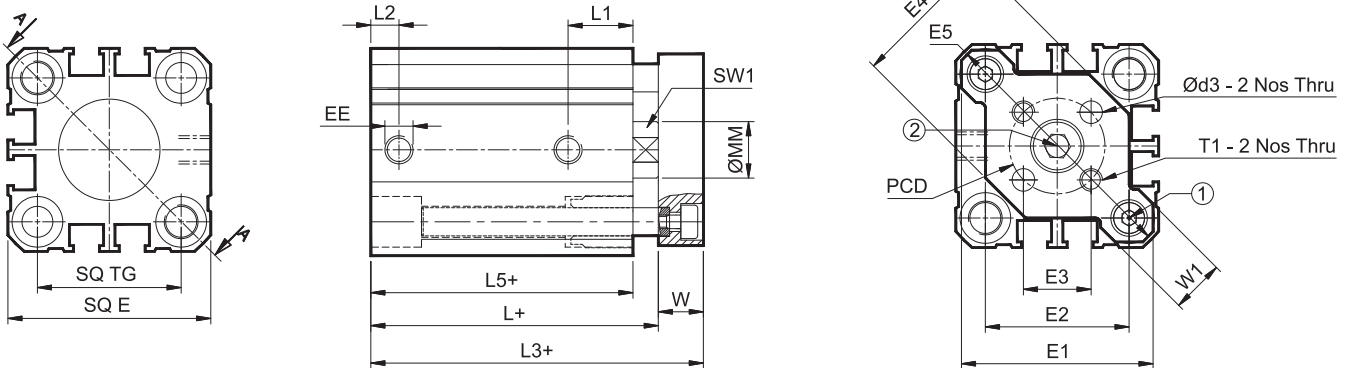
Cat No A02G - 01 - 01 - C

## Basic cylinder

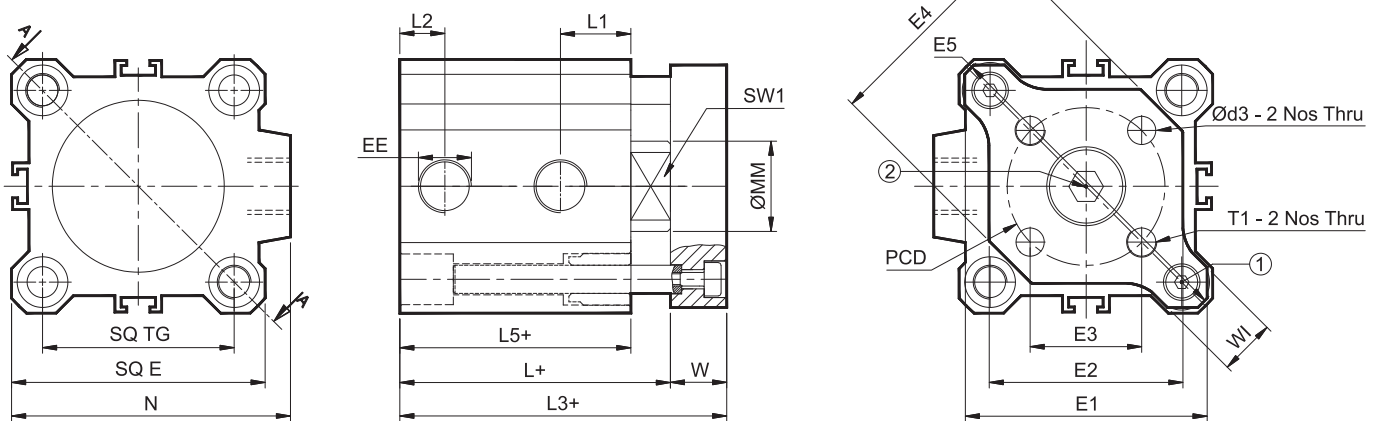
Sizes - Ø12, Ø16



Sizes - Ø20, Ø25



Sizes - Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



## Section AA

+ Add stroke

Model G	Model G1	Model G2
Counter bore and thread on both sides	Counter bore and through hole on both sides	Thread on both sides

# AIR CYLINDER

## Series A02G, A02G1, A02G2

Cat No A02G - 01 - 01 - C

**Model G - Counter bore and thread on both sides**

+ Add stroke

Product No.	Cylinder bore Ø	MM	Ød1	Ød2	L4	SW1	L1	L2	EE	TG ±0.1	E	N	L5	L	L3	W	E1	E2	E3	PCD ±0.1	T1	Ød3	W1	E4	E5	T2	L6
A02012000G	12	6	3.5	6	5.5	5	11.5	5	M5x0.8	15.5	25	-	29.5	33	39	6	24	15	7.1	10	M3x0.5	3	7.5	15	31.5	M4x0.7	8
A02016000G	16	8	3.5	6	5.5	6	11	5.5	M5x0.8	20	29	-	30.5	34	40	6	28	19	9.9	14	M3x0.5	3	7.5	20	37	M4x0.7	8
A02020000G	20	10	5.5	9	9.5	8	11.5	5	M5x0.8	25.5	36	-	31.5	35	43	8	34	25.5	12	17	M4x0.7	4	9.5	26	45.5	M6x1	10
A02025000G	25	12	5.5	9	9.5	10	11	5	M5x0.8	28	40	-	36	41	49	8	38	29.5	15.6	22	M5x0.8	5	9.5	30	50.5	M6x1	10
A02032000G	32	16	5.5	9	9.5	14	12.5	8	G1/8	34	45	49.5	41	48	58	10	43	34.4	19.8	28	M5x0.8	5	10	38	58.5	M6x1	10
A02040000G	40	16	5.5	9	9.5	14	11.5	8	G1/8	40	52	57	36.5	43.5	53.5	10	50	41.4	23.3	33	M5x0.8	5	10	46	67.5	M6x1	10
A02050000G	50	20	6.6	10.5	11	17	14	10.5	G1/4	50	64	71	42	50	62	12	62	53.4	29.7	42	M6x1	6	13	58	84.5	M8x1.25	13
A02063000G	63	20	9	13.5	11	17	14	10.5	G1/4	60	77	84	43	51	63	12	74	59.6	35.4	50	M6x1	6	15.5	69	100	M10x1.5	16
A02080000G	80	25	11	16.5	14.5	22	18.5	12.5	G3/8	77	98	104	54.5	64.5	78.5	14	95	79.5	46	65	M8x1.25	8	20	89	129	M12x1.75	19
A02100000G	100	30	11	16.5	14.5	27	21	12.5	G3/8	94	117	123.5	57.5	68.5	84.5	16	114	99	56.6	80	M10x1.5	10	20	113	153	M12x1.75	19

**Model G1 - Counter bore and through hole on both sides**

+ Add stroke

Product No.	Cylinder bore Ø	MM	Ød1	Ød2	L4	SW1	L1	L2	EE	TG ±0.1	E	N	L5	L	L3	W	E1	E2	E3	PCD ±0.1	T1	Ød3	W1	E4	E5
A02012000G1	12	6	3.5	6	5.5	5	11.5	5	M5x0.8	15.5	25	-	29.5	33	39	6	24	15	7.1	10	M3x0.5	3	7.5	15	31.5
A02016000G1	16	8	3.5	6	5.5	6	11	5.5	M5x0.8	20	29	-	30.5	34	40	6	28	19	9.9	14	M3x0.5	3	7.5	20	37
A02020000G1	20	10	5.5	9	9.5	8	11.5	5	M5x0.8	25.5	36	-	31.5	35	43	8	34	25.5	12	17	M4x0.7	4	9.5	26	45.5
A02025000G1	25	12	5.5	9	9.5	10	11	5	M5x0.8	28	40	-	36	41	49	8	38	29.5	15.6	22	M5x0.8	5	9.5	30	50.5
A02032000G1	32	16	5.5	9	9.5	14	12.5	8	G1/8	34	45	49.5	41	48	58	10	43	34.4	19.8	28	M5x0.8	5	10	38	58.5
A02040000G1	40	16	5.5	9	9.5	14	11.5	8	G1/8	40	52	57	36.5	43.5	53.5	10	50	41.4	23.3	33	M5x0.8	5	10	46	67.5
A02050000G1	50	20	6.6	10.5	11	17	14	10.5	G1/4	50	64	71	42	50	62	12	62	53.4	29.7	42	M6x1	6	13	58	84.5
A02063000G1	63	20	9	13.5	11	17	14	10.5	G1/4	60	77	84	43	51	63	12	74	59.6	35.4	50	M6x1	6	15.5	69	100
A02080000G1	80	25	11	16.5	14.5	22	18.5	12.5	G3/8	77	98	104	54.5	64.5	78.5	14	95	79.5	46	65	M8x1.25	8	20	89	129
A02100000G1	100	30	11	16.5	14.5	27	21	12.5	G3/8	94	117	123.5	57.5	68.5	84.5	16	114	99	56.6	80	M10x1.5	10	20	113	153

**Model G2 - Thread on both sides**

+ Add stroke

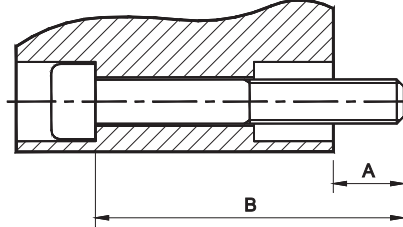
Product No.	Cylinder bore Ø	MM	Ød1	SW1	L1	L2	EE	TG ±0.1	E	N	L5	L	L3	W	E1	E2	E3	PCD ±0.1	T1	Ød3	W1	E4	E5	T2	L6
A02012000G2	12	6	3.5	5	11.5	5	M5x0.8	15.5	25	-	29.5	33	39	6	24	15	7.1	10	M3x0.5	3	7.5	15	31.5	M4x0.7	8
A02016000G2	16	8	3.5	6	11	5.5	M5x0.8	20	29	-	30.5	34	40	6	28	19	9.9	14	M3x0.5	3	7.5	20	37	M4x0.7	8
A02020000G2	20	10	5.5	8	11.5	5	M5x0.8	25.5	36	-	31.5	35	43	8	34	25.5	12	17	M4x0.7	4	9.5	26	45.5	M6x1	10
A02025000G2	25	12	5.5	10	11	5	M5x0.8	28	40	-	36	41	49	8	38	29.5	15.6	22	M5x0.8	5	9.5	30	50.5	M6x1	10
A02032000G2	32	16	5.5	14	12.5	8	G1/8	34	45	49.5	41	48	58	10	43	34.4	19.8	28	M5x0.8	5	10	38	58.5	M6x1	10
A02040000G2	40	16	5.5	14	11.5	8	G1/8	40	52	57	36.5	43.5	53.5	10	50	41.4	23.3	33	M5x0.8	5	10	46	67.5	M6x1	10
A02050000G2	50	20	6.6	17	14	10.5	G1/4	50	64	71	42	50	62	12	62	53.4	29.7	42	M6x1	6	13	58	84.5	M8x1.25	13
A02063000G2	63	20	9	17	14	10.5	G1/4	60	77	84	43	51	63	12	74	59.6	35.4	50	M6x1	6	15.5	69	100	M10x1.5	16
A02080000G2	80	25	11	22	18.5	12.5	G3/8	77	98	104	54.5	64.5	78.5	14	95	79.5	46	65	M8x1.25	8	20	89	129	M12x1.75	19
A02100000G2	100	30	11	27	21	12.5	G3/8	94	117	123.5	57.5	68.5	84.5	16	114	99	56.6	80	M10x1.5	10	20	113	153	M12x1.75	19

# AIR CYLINDER

## Series A02G, A02G1, A02G2

Cat No A02G - 01 - 01 - C

### Recommended bolt size for mounting for A02G1 type only



Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B
A02012005G1	6	M3 x 35	A02016005G1	5	M3 x 35	A02020005G1	8	M5 x 35	A02025005G1	8.5	M5 x 40	A02032005G1	8.5	M5 x 45
010G1	6	x 40	010G1	5	x 40	010G1	8	x 40	010G1	8.5	x 45	010G1	8.5	x 50
015G1	6	x 45	015G1	5	x 45	015G1	8	x 45	015G1	8.5	x 50	015G1	8.5	x 55
020G1	6	x 50	020G1	5	x 50	020G1	8	x 50	020G1	8.5	x 55	020G1	8.5	x 60
025G1	6	x 55	025G1	5	x 55	025G1	8	x 55	025G1	8.5	x 60	025G1	8.5	x 65
030G1	6	x 60	030G1	5	x 60	030G1	8	x 60	030G1	8.5	x 65	030G1	8.5	x 70
040G1	6	x 70	040G1	5	x 70	040G1	8	x 70	040G1	8.5	x 75	040G1	8.5	x 80
						050G1	8	x 80	050G1	8.5	x 85	050G1	8.5	x 90
												060G1	8.5	x 100

Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B	Ordering no.	A	Bolt size B
A02040005G1	8	M5 x 40	A02050010G1	9	M6 x 50	A02063010G1	13	M8 x 55	A02080010G1	15	M10 x 65	A02100010G1	17	M10 x 70
010G1	8	x 45	020G1	9	x 60	020G1	13	x 65	020G1	15	x 75	020G1	17	x 80
015G1	8	x 50	030G1	9	x 70	030G1	13	x 75	030G1	15	x 85	030G1	17	x 90
020G1	8	x 55	040G1	9	x 80	040G1	13	x 85	040G1	15	x 95	040G1	17	x 100
025G1	8	x 60	050G1	9	x 90	050G1	13	x 95	050G1	15	x 105	050G1	17	x 110
030G1	8	x 65	060G1	9	x 100	060G1	13	x 105	060G1	15	x 115	060G1	17	x 120
040G1	8	x 75	070G1	9	x 110	070G1	13	x 115	070G1	15	x 125	070G1	17	x 130
050G1	8	x 85	080G1	9	x 120	080G1	13	x 125	080G1	15	x 135	080G1	17	x 140
060G1	8	x 95												

### How to order

<b>A02</b>	<b>025</b>	<b>025</b>	<b>G</b>																																																						
<table border="1"> <thead> <tr> <th colspan="2">Piston Ø (mm)</th> </tr> </thead> <tbody> <tr><td>012</td><td>- Ø 12</td></tr> <tr><td>016</td><td>- Ø 16</td></tr> <tr><td>020</td><td>- Ø 20</td></tr> <tr><td>025</td><td>- Ø 25</td></tr> <tr><td>032</td><td>- Ø 32</td></tr> <tr><td>040</td><td>- Ø 40</td></tr> <tr><td>050</td><td>- Ø 50</td></tr> <tr><td>063</td><td>- Ø 63</td></tr> <tr><td>080</td><td>- Ø 80</td></tr> <tr><td>100</td><td>- Ø 100</td></tr> </tbody> </table>	Piston Ø (mm)		012	- Ø 12	016	- Ø 16	020	- Ø 20	025	- Ø 25	032	- Ø 32	040	- Ø 40	050	- Ø 50	063	- Ø 63	080	- Ø 80	100	- Ø 100	<table border="1"> <thead> <tr> <th colspan="2">Stroke (mm)</th> </tr> </thead> <tbody> <tr><td>005</td><td>- 5</td></tr> <tr><td>010</td><td>- 10</td></tr> <tr><td>015</td><td>- 15</td></tr> <tr><td>020</td><td>- 20</td></tr> <tr><td>025</td><td>- 25</td></tr> <tr><td>030</td><td>- 30</td></tr> <tr><td>040</td><td>- 40</td></tr> <tr><td>050</td><td>- 50</td></tr> <tr><td>060</td><td>- 60</td></tr> <tr><td>070</td><td>- 70</td></tr> <tr><td>080</td><td>- 80</td></tr> </tbody> </table>	Stroke (mm)		005	- 5	010	- 10	015	- 15	020	- 20	025	- 25	030	- 30	040	- 40	050	- 50	060	- 60	070	- 70	080	- 80	<table border="1"> <thead> <tr> <th colspan="2">Guide rod mounting type</th> </tr> </thead> <tbody> <tr><td>G</td><td>- Counter bore with thread</td></tr> <tr><td>G1</td><td>- Counter bore with through hole</td></tr> <tr><td>G2</td><td>- Thread</td></tr> </tbody> </table>		Guide rod mounting type		G	- Counter bore with thread	G1	- Counter bore with through hole	G2	- Thread
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### Ordering Example:

Compact double acting cylinder with guide rod bore Ø25 and stroke 25 mm (Counter bore with thread):  
**A02025025G**

Compact double acting cylinder with guide rod bore Ø25 and stroke 25 mm (Counter bore with thru hole):  
**A02025025G1**

For your special requirements of cylinders or for further informations contact your regional dealer or **JANATICS**

Subject to change