



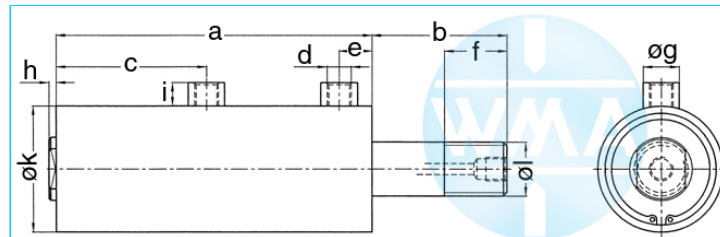
Welding cylinder

Ground pin

Version: 2011-01

**bilateral air connection,
double-stage pressurized**

undamped



Nominal size 038

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	173	55	82	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.036.
50	201	55	96	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.050.
65	231	55	111	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.065.
80	261	55	126	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.080.
100	301	55	146	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.100.
130	361	55	176	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.130.
150	401	55	196	Rp1/4"	18	35	20	4	13	48	M24	0.2 kN	102.110.121.038.150.

* at 1 bar pressure, S = stroke

Nominal size 044

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	173	55	82	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.036.
50	201	55	96	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.050.
65	231	55	111	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.065.
80	261	55	126	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.080.
100	301	55	146	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.100.
130	361	55	176	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.130.
150	401	55	196	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.121.044.150.

* at 1 bar pressure, S = stroke

Nominal size 058

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	173	75	82	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.036.
50	201	75	96	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.050.
65	231	75	111	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.065.
80	261	75	126	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.080.
100	301	75	146	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.100.
130	361	75	176	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.130.
150	401	75	196	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.121.058.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.121.058.036.??? No. Force connection (S. 11).?? No. Cylinder rod (S. 12)!

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Cylinder-Ground pin-1



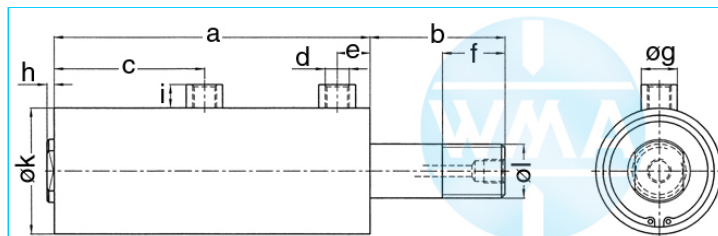
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
double-stage pressurized

undamped



Nominal size 070

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.121.070.150.

* at 1 bar pressure, S = stroke

Nominal size 080

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.121.080.150.

* at 1 bar pressure, S = stroke

Nominal size 090

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.121.090.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.121.080.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-2



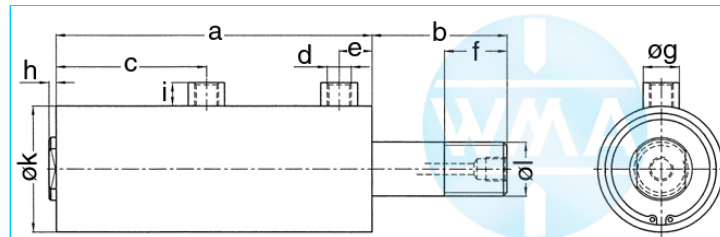
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
double-stage pressurized

end position damped



Nominal size 044

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	201	55	96	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.036.
50	231	55	111	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.050.
65	261	55	126	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.065.
80	301	55	146	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.080.
100	361	55	176	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.100.
130	401	55	196	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.122.044.130.

* at 1 bar pressure, S = stroke

Nominal size 058

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	201	55	96	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.036.
50	231	55	111	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.050.
65	261	55	126	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.065.
80	301	55	146	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.080.
100	361	55	176	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.100.
130	401	55	196	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.122.058.130.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.122.058.065.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-3



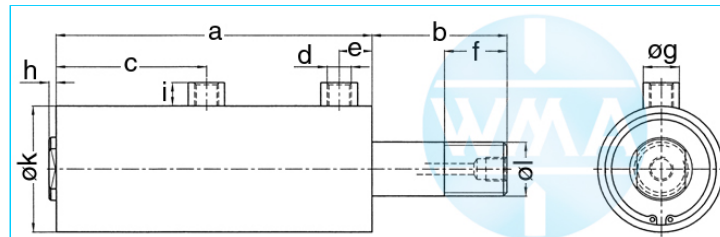
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
double-stage pressurized

end position damped



Nominal size 070

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	234	100	113	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.036.
50	264	100	128	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.050.
65	294	100	143	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.065.
80	334	100	163	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.080.
100	394	100	193	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.100.
130	434	100	213	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.122.070.130.

* at 1 bar pressure, S = stroke

Nominal size 080

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	234	100	113	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.036.
50	264	100	128	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.050.
65	294	100	143	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.065.
80	334	100	163	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.080.
100	394	100	193	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.100.
130	434	100	213	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.122.080.130.

* at 1 bar pressure, S = stroke

Nominal size 090

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	234	100	113	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.036.
50	264	100	128	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.050.
65	294	100	143	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.065.
80	334	100	163	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.080.
100	394	100	193	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.100.
130	434	100	213	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.122.090.130.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.122.080.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-4



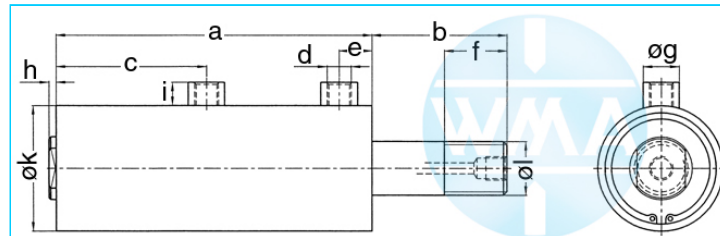
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
double-stage pressurized

damped independent of stroke



Nominal size 044

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	173	55	82	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.036.
50	201	55	96	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.050.
65	231	55	111	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.065.
80	261	55	126	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.080.
100	301	55	146	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.100.
130	361	55	176	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.130.
150	401	55	196	Rp1/4"	18	35	20	4	13	55	M24	0.28 kN	102.110.123.044.150.

* at 1 bar pressure, S = stroke

Nominal size 058

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	173	75	82	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.036.
50	201	75	96	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.050.
65	231	75	111	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.065.
80	261	75	126	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.080.
100	301	75	146	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.100.
130	361	75	176	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.130.
150	401	75	196	Rp1/4"	18	35	20	4	13	70	M30	0.5 kN	102.110.123.058.150.

* at 1 bar pressure, S = stroke

Nominal size 070

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	90	M42x3	0.72 kN	102.110.123.070.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.123.058.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-5



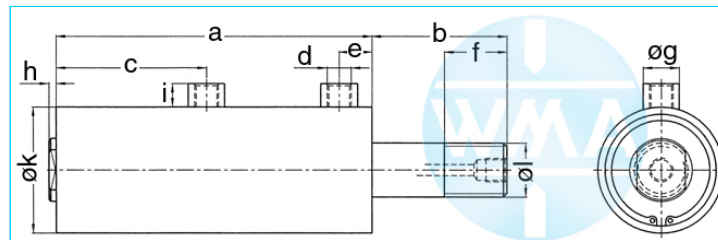
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
double-stage pressurized

damped independent of stroke



Nominal size 080

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	100	M42x3	0.95 kN	102.110.123.080.150.

* at 1 bar pressure, S = stroke

Nominal size 090

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	206	100	99	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.036.
50	234	100	113	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.050.
65	264	100	128	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.065.
80	294	100	143	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.080.
100	334	100	163	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.100.
130	394	100	193	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.130.
150	434	100	213	Rp3/8"	17	55	25	4	16	110	M42x3	1.2 kN	102.110.123.090.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.123.080.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-6



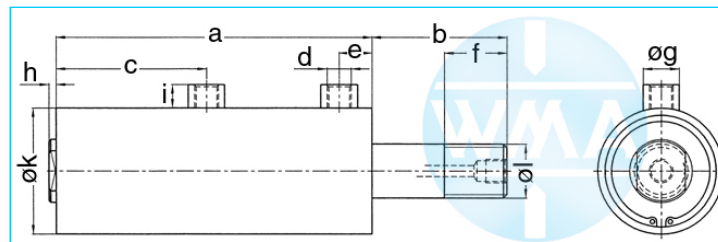
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
three-stage pressurized

undamped



Nominal size 038

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	232	55	141	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.036.
50	274	55	169	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.050.
65	319	55	199	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.065.
80	364	55	229	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.080.
100	424	55	269	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.100.
130	514	55	329	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.130.
150	574	55	369	Rp1/4"	18	35	20	4	13	48	M24	0.28 kN	102.110.131.038.150.

* at 1 bar pressure, S = stroke

Nominal size 044

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	232	55	141	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.036.
50	274	55	169	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.050.
65	319	55	199	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.065.
80	364	55	229	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.080.
100	424	55	269	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.100.
130	514	55	329	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.130.
150	574	55	369	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.131.044.150.

* at 1 bar pressure, S = stroke

Nominal size 058

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	232	55	141	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.036.
50	274	55	169	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.050.
65	319	55	199	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.065.
80	364	55	229	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.080.
100	424	55	269	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.100.
130	514	55	329	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.130.
150	574	55	369	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.131.058.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.131.058.036.??? No. Force connection (S. 11).?? No. Cylinder rod (S. 12)!

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Cylinder-Ground pin-7



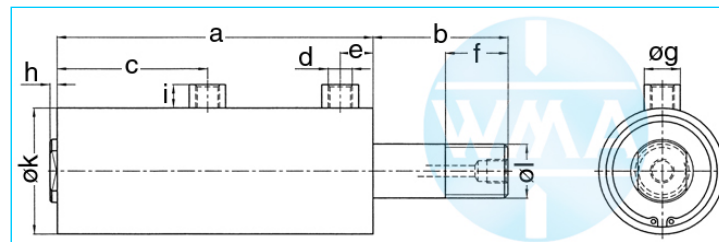
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
three-stage pressurized

undamped



Nominal size 070

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.131.070.150.

* at 1 bar pressure, S = stroke

Nominal size 080

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.131.080.150.

* at 1 bar pressure, S = stroke

Nominal size 090

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.131.090.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.131.080.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-8



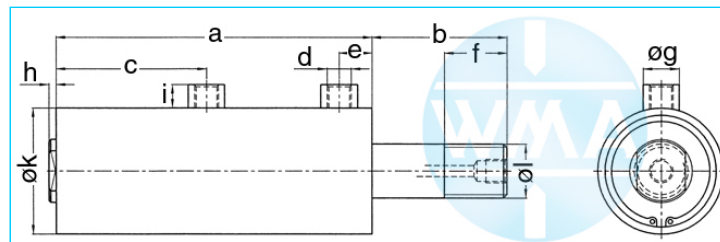
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
three-stage pressurized

damped independent of stroke



Nominal size 044

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	232	55	141	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.036.
50	274	55	169	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.050.
65	319	55	199	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.065.
80	364	55	229	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.080.
100	424	55	269	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.100.
130	514	55	329	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.130.
150	574	55	369	Rp1/4"	18	35	20	4	13	55	M24	0.39 kN	102.110.132.044.150.

* at 1 bar pressure, S = stroke

Nominal size 058

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	232	55	141	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.036.
50	274	55	169	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.050.
65	319	55	199	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.065.
80	364	55	229	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.080.
100	424	55	269	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.100.
130	514	55	329	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.130.
150	574	55	369	Rp1/4"	18	35	20	4	13	70	M30	0.72 kN	102.110.132.058.150.

* at 1 bar pressure, S = stroke

Nominal size 070

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	90	M42x3	1.04 kN	102.110.132.070.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.132.058.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-9



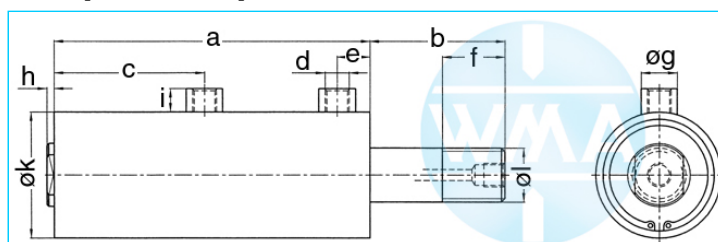
Welding cylinder

Ground pin

Version: 2011-01

unilateral air connection,
three-stage pressurized

damped independent of stroke



Nominal size 080

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	100	M42x3	1.4 kN	102.110.132.080.150.

* at 1 bar pressure, S = stroke

Nominal size 090

S	a	b	c	d	e	f	g	h	i	k	l	Force*	Order-number
36	276	100	169	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.036.
50	318	100	197	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.050.
65	363	100	227	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.065.
80	408	100	257	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.080.
100	468	100	297	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.100.
130	558	100	357	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.130.
150	618	100	397	Rp3/8"	17	55	25	4	16	110	M42x3	1.8 kN	102.110.132.090.150.

* at 1 bar pressure, S = stroke

Complete the Order-number:

Example: 102.110.132.080.036.??? No. Force connection (S.11).?? No. Cylinder rod (S.12)!

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Cylinder-Ground pin-10



Welding cylinder

Ground pin

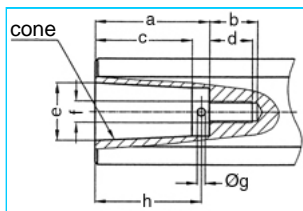
Version: 2011-01

Force connection

Write the number (with point) from the selected Force connection direct behind the Order-number of the cylinder and complete the whole Order-number with the chosen number of the Cylinder rod.

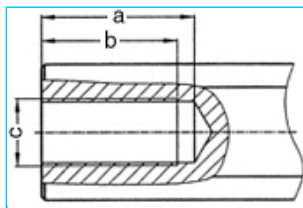
Example: 102.110.131.058.036.401.?? No. Cylinder rod (S.12)

Internal cone



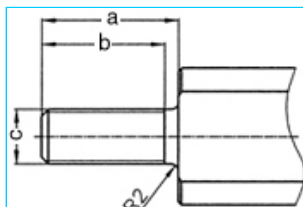
a	b	c	d	e	cone	f	g	h	No.
33	18	27.0	16	17.780	MK2	M8	3	30	101.
42	18	35.5	16	21.806	MK3	M8	3	39	102.
42	18	35.5	16	21.750	1:10	M8	3	39	103.

Female thread



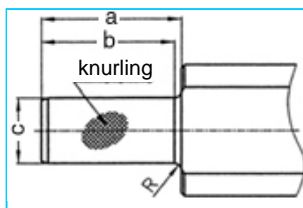
a	b	c	No.
45	40	M20 x 1.5	201.
62	58	M20 x 1.5	202.

Male thread



a	b	c	No.
40	36	M16 x 1.5	301.
40	36	M20 x 1.5	302.
40	36	M24 x 1.5	303.

Knurl



a	b	c	Knurling	R	No.
42	40	20 ¹⁷	1 x 0.2 DIN 82	2	401.
42	42	25 ¹⁷	1 x 0.2 DIN 82	-	402.

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Cylinder-Ground pin-11



Welding cylinder

Ground pin

Version: 2011-01

Cylinder rod

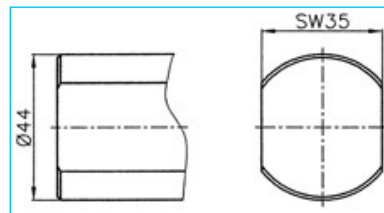
flattened and rotation locked

Complete the Order-number with the selected number of the chosen cylinder rod.

Example: 102.110.131.058.036.401.03

For piston diameter

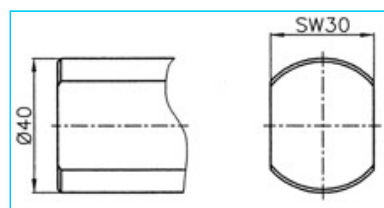
70, 80, 90



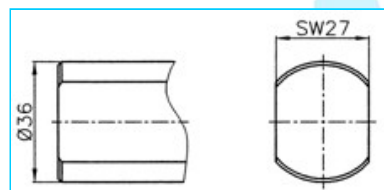
No. 00

For piston diameter

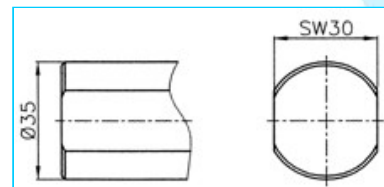
38, 44, 58



No. 01



No. 02



No. 03

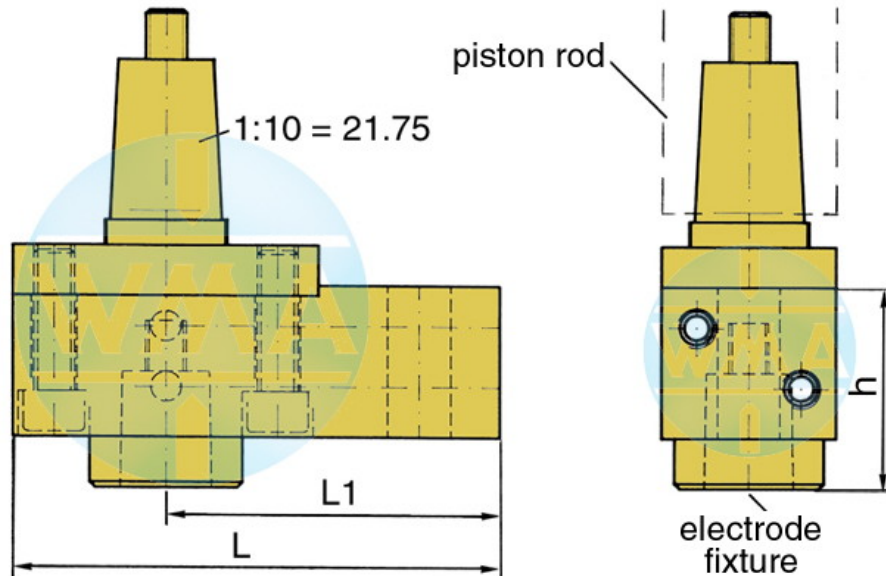


Welding cylinder

Ground pin

Version: 2011-01

Electrode holder for welding cylinders



Piston Ø	L	L1	Water connection
38	95	65	possible on both sides
44	95	65	possible on both sides
58	110	80	possible on both sides
70	110	80	possible on both sides
80	120	90	possible on both sides
90	120	90	possible on both sides

Available cones for the electrode fixture

cone	Ø d	h
1 : 10	9.8	39
1 : 10	12.0	39
1 : 10	12.7	39
1 : 10	15.5	39
1 : 10	15.75	39
1 : 10	17.75	50
1 : 10	19.0	50
MK 1	12.065	39
MK 2	17.781	50

Further cones available on request!

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Cylinder-Ground pin-13

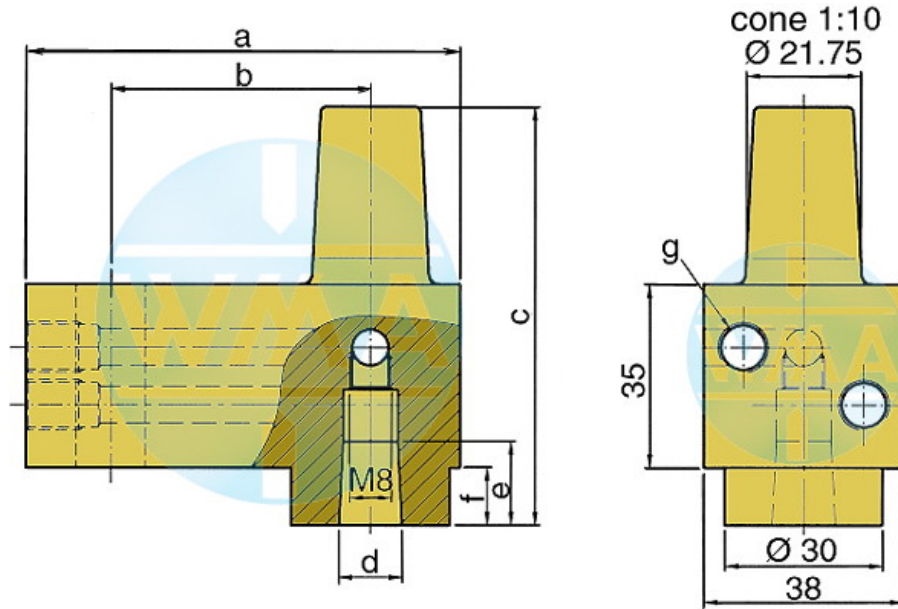


Welding cylinder

Ground pin

Version: 2011-01

Electrode holder



This electrode holder is main used in welding machines with variable and fast-change electrode shafts.

a	b	c	d	e	f	g	Order-number	
82	49	80	1:10=12.00	16	16	11	M10 x 1 or R 1/8"	L60051080-000
82	49	80	MK1	16	16	11	M10 x 1 or R 1/8"	L60091080-000
82	49	80	1:10=15.75	20	20	11	M10 x 1 or R 1/8"	L60131080-001
82	49	80	1:10=18	20	20	11	M10 x 1 or R 1/8"	L60061080-000
82	49	80	MK2	20	20	11	M10 x 1 or R 1/8"	L60101080-000
82	49	90	1:10=21.75	31	31	21	M10 x 1 or R 1/8"	L60221080-000
82	49	90	MK3	31	31	21	M10 x 1 or R 1/8"	L60111080-000
97	64	90	1:10=21.75	31	31	21	M10 x 1 or R 1/8"	L60221090-000
97	64	90	MK3	31	31	21	M10 x 1 or R 1/8"	L60111090-000
107	74	90	1:10=21.75	31	31	21	M10 x 1 or R 1/8"	L60221090-001
107	74	90	MK3	31	31	21	M10 x 1 or R 1/8"	L60111090-001

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