



NORRES INDUSTRIAL HOSES AUTOMOTIVE INDUSTRY



Industrial robot, robotic, welding equipment, welding robot,
welding gun: Welding spot resistant hose, hose for dresspack for
media as water and air

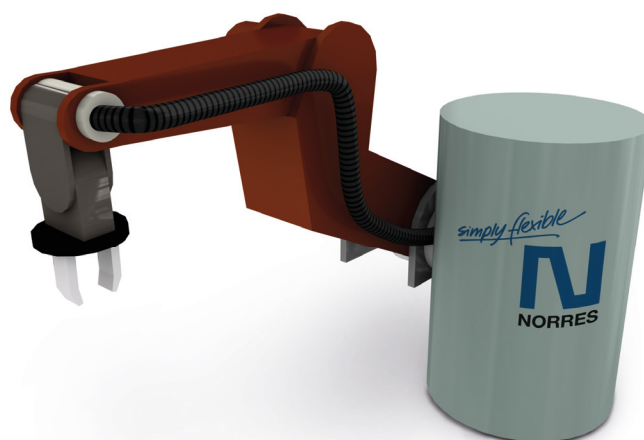
Recommended by NORRES customers:

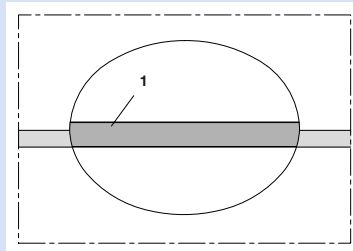
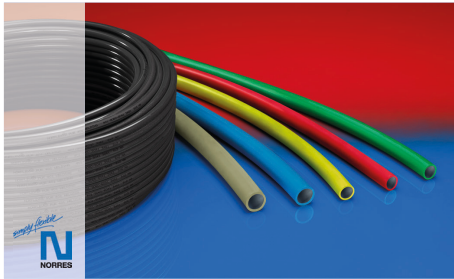
NORFLEX® PUR 441 ROBOTIC



Proven Alternatives:

NORFLEX® PUR 401 WELDING





Flame-retardant polyurethane hose/ tubing, for flying sparks or welding sparks

Applications

- flexible hose/ ducting for liquids and for gases and for abrasive solids
- hose/ tubing pump
- pneumatic tube
- compressed air hose, cooling water hose, water hose
- industrial robot, robotic, welding equipment, welding robot, welding gun: welding spot resistant hose, hose for dresspack for media as water and air
- heating hose: interior hose for media transfer

Properties

- very good resistance to flying sparks and welding sparks

- highly flexible
- highly abrasion resistant
- crush resistant
- good resistance to oil, gasoline, and chemicals
- flame-retardant according to: UL94-V0/V2
- conforms to RoHS guideline

Temperature range

- 5°F to 140°F

Design, material

NORFLEX® design

- wall interior and exterior smooth; wall: special premium polyurethane with flame retardant additive (Pre-PUR®)

Delivery variants

- further diameters and lengths available on request
- cream (standard)
- gray (standard)
- black (standard)
- blue (standard)
- red (standard)
- yellow (standard)
- green (standard)
- special colors: partially colored, completely colored
- customer-specific branding

I.D. in / mm	Wall thickness Inch	O.D. in	Pressure psi	burst pressure psi	Bending Radius in	Weight lbs./ft	Production Length ft	Order No.
Color blue								
- / 2	0.04	0.16	362.60 (-)	580.15	0.25	0.025	300	401-9020-6051
- / 4	0.04	0.25	261.05 (-)	507.65	0.38	0.045	150 300	401-9040-6051
- / 4	0.08	0.31	333.60 (-)	681.70	0.50	0.105	150 300	401-9040-6041
- / 5.5	0.05	0.31	203.05 (-)	406.10	0.56	0.075	300	401-9055-6061
1/4 / 6	0.06	0.35	203.05 (-)	406.10	0.59	0.100	150 300	401-9060-6071
1/4 / 6	0.08	0.38	261.07 (-)	522.14	0.67	0.04	150 300	401-9060-6041
- / 7	0.06	0.38	174.05 (-)	362.60	0.85	0.110	300	401-9070-6071
5/16 / 8	0.08	0.47	188.55 (-)	435.10	0.94	0.170	150 300	401-9080-6041
3/8 / 10	0.04	0.47	116.05 (-)	290.10	1.36	0.095	150 300	401-9100-6051
3/8 / 10	0.08	0.55	174.05 (-)	464.10	1.75	0.210	150 300	401-9100-6041
3/8 / 10	0.10	0.59	261.05 (-)	507.65	1.97	0.275	150 300	401-9100-6081
- / 11	0.08	0.59	188.55 (-)	435.10	1.75	0.235	150 300	401-9110-6041
- / 11	0.10	0.63	203.05 (-)	493.15	1.95	0.300	150 300	401-9110-6081
- / 17	0.10	0.88	116.05 (-)	290.10	2.81	0.430	150	401-9170-6081
7/8 / 22	0.13	1.10	101.55 (-)	261.05	5.47	0.660	150	401-9220-6091
Color cream								
- / 2	0.04	0.16	362.60 (-)	580.15	0.25	0.025	300	401-9020-6056
- / 4	0.04	0.25	261.05 (-)	507.65	0.38	0.045	150 300	401-9040-6056
- / 4	0.08	0.31	333.60 (-)	681.70	0.50	0.105	150 300	401-9040-6046
- / 5.5	0.05	0.31	203.05 (-)	406.10	0.56	0.075	300	401-9055-6066
1/4 / 6	0.06	0.35	203.05 (-)	406.10	0.59	0.100	150 300	401-9060-6076
1/4 / 6	0.08	0.38	261.05 (-)	522.15	0.67	0.140	150 300	401-9060-6046
- / 7	0.06	0.38	174.05 (-)	362.60	0.85	0.110	300	401-9070-6076
5/16 / 8	0.08	0.47	188.55 (-)	435.10	0.94	0.170	150 300	401-9080-6046
3/8 / 10	0.04	0.47	116.05 (-)	290.10	1.36	0.095	150 300	401-9100-6056

Positive and negative pressure ratings are the recommended maximum operating values. Products can be manufactured to meet higher operating values upon request. The bend radius is calculated from the center of the hose in an arched position. Additional information at www.norres.com. NORRES reserves the right to modify technical data at any time. Technical data based on tests at 68°F and are approx. values. Proper use and maintenance of NORRES hoses is the sole responsibility of purchaser and ultimate user of the product. The individual conditions, applications and the number of variables make firm recommendations technically impossible. This information is intended as a general guide only.



I.D.	Wall thickness	O.D.	Pressure	burst pressure	Bending Radius	Weight	Production Length	Order No.
in / mm	Inch	in	psi	psi	in	lbs./ft	ft	
3/8 / 10	0.08	0.55	174.05 (-)	464.10	1.75	0.210	150 300	401-9100-6046
3/8 / 10	0.10	0.59	261.05 (-)	507.65	1.97	0.275	150 300	401-9100-6086
- / 11	0.08	0.59	188.55 (-)	435.10	1.75	0.235	150 300	401-9110-6046
- / 11	0.10	0.63	203.05 (-)	493.15	1.95	0.300	150 300	401-9110-6086
- / 17	0.10	0.88	116.05 (-)	290.10	2.81	0.430	150	401-9170-6086
7/8 / 22	0.13	1.10	101.55 (-)	261.05	5.47	0.660	150	401-9220-6096

Color yellow								
- / 2	0.04	0.16	362.60 (-)	580.15	0.25	0.025	300	401-9020-6054
- / 4	0.04	0.25	261.05 (-)	507.65	0.38	0.045	150 300	401-9040-6054
- / 4	0.08	0.31	333.60 (-)	681.70	0.50	0.105	150 300	401-9040-6044
- / 5.5	0.05	0.31	203.05 (-)	406.10	0.56	0.075	300	401-9055-6064
1/4 / 6	0.06	0.35	203.05 (-)	406.10	0.59	0.100	150 300	401-9060-6074
1/4 / 6	0.08	0.38	261.05 (-)	522.15	0.67	0.140	150 300	401-9060-6044
- / 7	0.06	0.38	174.05 (-)	362.60	0.85	0.110	300	401-9070-6074
5/16 / 8	0.08	0.47	188.55 (-)	435.10	0.94	0.170	150 300	401-9080-6044
3/8 / 10	0.04	0.47	116.05 (-)	290.10	1.36	0.095	150 300	401-9100-6054
3/8 / 10	0.08	0.55	174.05 (-)	464.10	1.75	0.210	150 300	401-9100-6044
3/8 / 10	0.10	0.59	261.05 (-)	507.65	1.97	0.275	150 300	401-9100-6084
- / 11	0.08	0.59	188.55 (-)	435.10	1.75	0.235	150 300	401-9110-6044
- / 11	0.10	0.63	203.05 (-)	493.15	1.95	0.300	150 300	401-9110-6084
- / 17	0.10	0.88	116.05 (-)	290.10	2.81	0.430	150	401-9170-6084
7/8 / 22	0.13	1.10	101.55 (-)	261.05	5.47	0.660	150	401-9220-6094

Color green								
- / 2	0.04	0.16	362.60 (-)	580.15	0.25	0.025	300	401-9020-6055
- / 4	0.04	0.25	261.05 (-)	507.65	0.38	0.045	150 300	401-9040-6055
- / 4	0.08	0.31	333.60 (-)	681.70	0.50	0.105	150 300	401-9040-6045
- / 5.5	0.05	0.31	203.05 (-)	406.10	0.56	0.075	300	401-9055-6065
1/4 / 6	0.06	0.35	203.05 (-)	406.10	0.59	0.100	150 300	401-9060-6075
1/4 / 6	0.08	0.38	261.05 (-)	522.15	0.67	0.140	150 300	401-9060-6045
- / 7	0.06	0.38	174.05 (-)	362.60	0.85	0.110	300	401-9070-6075
5/16 / 8	0.08	0.47	188.55 (-)	435.10	0.94	0.170	150 300	401-9080-6045
3/8 / 10	0.04	0.47	116.05 (-)	290.10	1.36	0.095	150 300	401-9100-6055
3/8 / 10	0.08	0.55	174.05 (-)	464.10	1.75	0.210	150 300	401-9100-6045
3/8 / 10	0.10	0.59	261.05 (-)	507.65	1.97	0.275	150 300	401-9100-6085
- / 11	0.08	0.59	188.55 (-)	435.10	1.75	0.235	150 300	401-9110-6045
- / 11	0.10	0.63	203.05 (-)	493.15	1.95	0.300	150 300	401-9110-6085
- / 17	0.10	0.88	116.05 (-)	290.10	2.81	0.430	150	401-9170-6085
7/8 / 22	0.13	1.10	101.55 (-)	261.05	5.47	0.660	150	401-9220-6095

Color red								
- / 2	0.04	0.16	362.60 (-)	580.15	0.25	0.025	300	401-9020-6053
- / 4	0.04	0.25	261.05 (-)	507.65	0.38	0.045	150 300	401-9040-6053
- / 4	0.08	0.31	333.60 (-)	681.70	0.50	0.105	150 300	401-9040-6043
- / 5.5	0.05	0.31	203.05 (-)	406.10	0.56	0.075	300	401-9055-6063
1/4 / 6	0.06	0.35	203.05 (-)	406.10	0.59	0.100	150 300	401-9060-6073
1/4 / 6	0.08	0.38	261.05 (-)	522.15	0.67	0.140	150 300	401-9060-6043
- / 7	0.06	0.38	174.05 (-)	362.60	0.85	0.110	300	401-9070-6073
3/8 / 10	0.10	0.59	261.05 (-)	507.65	1.97	0.275	300	401-9100-6083
- / 11	0.08	0.59	188.55 (-)	435.10	1.75	0.235	300	401-9110-6043

Positive and negative pressure ratings are the recommended maximum operating values. Products can be manufactured to meet higher operating values upon request. The bend radius is calculated from the center of the hose in an arched position. Additional information at www.norres.com. NORRES reserves the right to modify technical data at any time. Technical data based on tests at 68°F and are approx. values. Proper use and maintenance of NORRES hoses is the sole responsibility of purchaser and ultimate user of the product. The individual conditions, applications and the number of variables make firm recommendations technically impossible. This information is intended as a general guide only.



I.D.	Wall thickness	O.D.	Pressure	burst pressure	Bending Radius	Weight	Production Length	Order No.
in / mm	Inch	in	psi	psi	in	lbs./ft	ft	
- / 11	0.10	0.63	203.05 (-)	493.15	1.95	0.300	150	401-9110-6083
- / 17	0.10	0.88	116.05 (-)	290.10	2.81	0.430	150	401-9170-6083
7/8 / 22	0.13	1.10	101.55 (-)	261.05	5.47	0.660	150	401-9220-6093

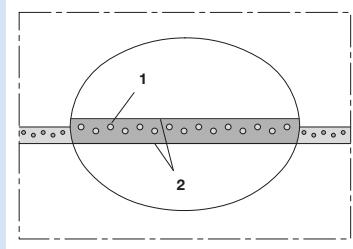
O.D. tolerance: < 0.24 in: +0.039 in / -0.039 in; 0.24 in .. 0.63 in: +0.059 in / -0.059 in; > 0.63 in: +0.079 in / -0.079 in; Wall thickness tolerance: 0.039 in - 0.059 in; 0 / -0.006 in; 0.079 in: 0 in / -0.008 in; 0.098 in: +0.006 in / -0.002 in; 0.12 in: +0.008 in / -0.039 in; Positive and negative pressure ratings are the recommended maximum operating values. Products can be manufactured to meet higher operating values upon request. The bend radius is calculated from the center of the hose in an arched position. NORRES reserves the right to modify technical data at any time. Technical data based on tests at 68°F and are approx. values. Proper use and maintenance of NORRES hoses is the sole responsibility of purchaser and ultimate user of the product. The individual conditions, applications and the number of variables make firm recommendations technically impossible. This information is intended as a general guide only. Additional information at www.norres.com/us/technology-us/

Accessories



CLAMP 208

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Abrasion resistant polyurethane hose/
tubing for industrial robots, fabric reinforced
high pressure hose

Applications

- flexible hose/ ducting for liquids and for gases and for abrasive solids
- injection moulding tool cooling, cooling water supply
- agricultural industry: high pressure spraying hose e.g. for pesticides
- compressed air hose, cooling water hose, water hose
- fabric reinforced hose/ braided hose
- industrial robot, robotic, welding equipment, welding robot, welding gun: welding spot resistant hose, hose for dresspack for media as water and air
- heating hose: interior hose for media transfer

Properties

- fabric reinforced
- highly flexible
- highly abrasion resistant
- crush resistant
- good resistance to oil, gasoline, and chemicals
- conforms to RoHS guideline

Temperature range

- 30°F to 175°F

Design, material

NORFLEX® design

1. fabric reinforced wall
2. smooth interior and exterior; wall: special premium polyurethane (Pre-PUR®)

Delivery variants

- further diameters and lengths available on request
- transparent (standard)
- gray (standard)
- black (standard)
- blue (standard)
- red (standard)
- yellow (standard)
- green (standard)
- special colors: full colored
- customer-specific branding

I.D. in / mm	O.D. in	Pressure psi	min. bursting pressure	Bending Radius in	Weight lbs./ft	Stock length ft	Further production lengths ft	Order No.
Color transparent								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0005
3/8 / 9.4	5/8	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0005
1/2 / 12.8	3/4	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0005
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0005
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	-	150	441-9190-0005
Color blue								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0400
3/8 / 9.4	0.63	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0400
1/2 / 12.8	0.75	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0400
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0400
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	150	-	441-9190-0400
Color gray								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0401
3/8 / 9.4	5/8	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0401
1/2 / 12.8	3/4	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0401
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0401
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	-	150	441-9190-0401
Color black								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0402
3/8 / 9.4	0.63	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0402
1/2 / 12.8	0.75	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0402
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0402
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	-	150	441-9190-0402

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I.D.	O.D.	Pressure	min. bursting	Bending Radius	Weight	Stock length	Further production lengths	Order No.
in / mm	in	psi	pressure	in	lbs./ft	ft	ft	
Color red								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0403
3/8 / 9.4	0.63	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0403
1/2 / 12.8	0.75	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0403
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0403
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	150	-	441-9190-0403
Color green								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0404
3/8 / 9.4	0.63	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0404
1/2 / 12.8	0.75	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0404
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0404
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	150	-	441-9190-0404
Color yellow								
1/4 / 6.4	0.50	290.10 (-)	1160.30	0.86	0.280	-	150	441-9064-0405
3/8 / 9.4	5/8	290.10 (-)	1160.30	2.18	0.335	150	-	441-9094-0405
1/2 / 12.8	3/4	290.10 (-)	1160.30	2.71	0.505	150	-	441-9128-0405
5/8 / 16	0.96	290.10 (-)	1087.80	4.60	0.680	-	150	441-9160-0405
3/4 / 19.5	1.12	290.10 (-)	725.20	5.52	0.905	-	150	441-9190-0405

I.D. tolerance: < 0.51 in: +0.059 in / -0.059 in; > 0.51 in: +0.079 in / -0.079 in; O.D. tolerance: +0.098 in / -0.098 in; Positive and negative pressure ratings are the recommended maximum operating values. Products can be manufactured to meet higher operating values upon request. The bend radius is calculated from the center of the hose in an arched position. NORRES reserves the right to modify technical data at any time. Technical data based on tests at 68°F and are approx. values. Proper use and maintenance of NORRES hoses is the sole responsibility of purchaser and ultimate user of the product. The individual conditions, applications and the number of variables make firm recommendations technically impossible. This information is intended as a general guide only. Additional information at www.norres.com/us/technology-us/

Accessories



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Positive and negative pressure ratings are the recommended maximum operating values. Products can be manufactured to meet higher operating values upon request. The bend radius is calculated from the center of the hose in an arched position. Additional information at www.norres.com. NORRES reserves the right to modify technical data at any time. Technical data based on tests at 68°F and are approx. values. Proper use and maintenance of NORRES hoses is the sole responsibility of purchaser and ultimate user of the product. The individual conditions, applications and the number of variables make firm recommendations technically impossible. This information is intended as a general guide only.



● Manufacture, warehouse, distribution ● Warehouse, distribution



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