

Swaging of Hydraulic Hoses



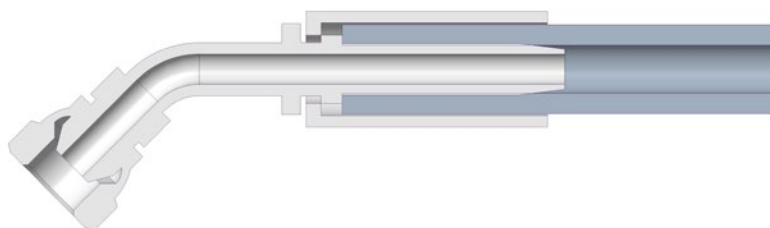
The information contained in this document is published without obligations and should only be viewed as a recommendation of how to swage hydraulic hoses provided by Selden Mast AB. Always check the settings and swaging diameters for the swaging machine in use



1. Cut hose in desired length. Cut straight.
2. Put the ferrule and hose together by hand until the hose reaches the bottom of the ferrule.



3. Push the nipple of the hose fitting into the hose by hand or by using an assembly unit. Push until the flange of the hose fitting stops against the ferrule (the fitting will push the hose out of the ferrule some millimetres). Make sure that the hose fitting is fixed to the ferrule correctly. See picture below. If the fit between the hose and ferrule is tight, grease may be used.



4. Crimp the ferrule in a hose-press. Crimp the ferrule according to the value of the table below. Check the diameter after swaging with a caliper.



Note the differences in dimension between the two types of 1/4" hoses. Information regarding hose types and ferrules can be found in tables below and in appendix.

Diameter after Swage			
Size	Ferrule	Hose	Diameter After Swage [mm]
1/4"	540-919	540-880	15.0 +0/-0.2
3/8"	540-920	540-870	18.9 +0/-0.2
1/2"	540-985	540-981	22.0 +0/-0.2
1/4"	540-919	540-965	15.0 +0/-0.2





Check the system very thoroughly during assembly to ensure that no impurities are present.

In 2019 Seldén Mast AB changed the hose type therefore, two different types of hoses are out on the market, please see table below. The old and new type have the same diameter after swaging. The hoses before 2019 is marked with OL7(or OL8) and the hoses from 2019 is marked with OL7 (or OL8) marine.

Ferrule, Selden Mast AB			
Size	Item No.	Diameter Before Swage [mm]	Description*
1/4"	540-919	18	PH Industrie, Ferrules, PF-R7-DN 06
3/8"	540-920	22	PH Industrie, Ferrules, PF-R7-DN 10
1/2"	540-985	25	PH Industrie, Ferrules, PF-R7-DN 12

* See appendix, product data sheet for more info

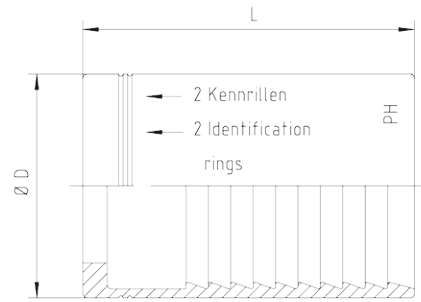
Hydraulic Hoses, Selden Mast AB, from 2019				
				
Size	Item No.	Diameter [mm]	Type	Description*
1/4"	540-880	11.8	SAE 100R7	ZEC, OL7 Marine Series thermoplastic hose, OL737000
3/8"	540-870	16.0	SAE 100R7	ZEC, OL7 Marine Series thermoplastic hose, OL757000
1/2"	540-981	20.3	SAE 100R7	ZEC, OL7 Marine Series thermoplastic hose, OL767000
1/4"	540-965	11.8	SAE 100R8	ZEC, OL8 Marine Series Thermoplastic hose, OL837000

Hydraulic Hoses, Selden Mast AB. Before 2019				
				
Size	Item No.	Diameter [mm]	Type	Description*
1/4"	540-880	11.8	SAE 100R7	ZEC, OL7 Series thermoplastic hose, OL730000
3/8"	540-870	16.0	SAE 100R7	ZEC, OL7 Series thermoplastic hose, OL750000
1/2"	540-981	20.3	SAE 100R7	ZEC, OL7 Series thermoplastic hose, OL760100
1/4"	540-965	11.8	SAE 100R8	ZEC, OL8 Series Thermoplastic hose, OL830000

* See appendix, product data sheet for more info.

Appendix

Rubrik 2.10 PF-R7



PF-R7 - non skive

For Hose Type:

R7 - DIN EN 855

R8 - DIN EN 855

To use for Nipples Category 2.17-2.64

Hose	Bore	Approx. Dimensions		Order-Code
		D	L	
05	3/16"	14	26,5	PF-R7-DN 05
06	1/4"	18	34,5	PF-R7-DN 06
08	5/16"	19	34,5	PF-R7-DN 08
10	3/8"	22	35,0	PF-R7-DN 10
12	1/2"	25	37,0	PF-R7-DN 12
16	5/8"	30	40,0	PF-R7-DN 16
19	3/4"	33	45,0	PF-R7-DN 19
25	1"	40	50,0	PF-R7-DN 25

OL7 Marine Series thermoplastic hose - WATER-PROOF COVER*

- PRESSURE FROM 70 TO 250 BAR
- SAE J517 -100R7, ISO 3949, DNV-GL, MSHA STANDARDS AND LLOYD'S REGISTER TYPE APPROVAL
- RECOMMENDED FOR OPERATING MACHINES AND LIFT TRUCKS THAT WORK AT LOW TEMPERATURES



LUBRICATION



HIGH PRESSURE



AIR



HYDRAULIC OIL

TECHNICAL FEATURES

Metric

Code	ID			OD	1:4 WP	R MIN	g	Ferrule Code
	inch	mm	DN	mm	bar	mm	g/m	
OL717000	1/8"	3.5	3	8.5	230	12	57	BP18R7
OL78947000	5/32"	4.0	4	8.9	250	25	58	BP532R7
OL727000**	3/16"	4.8	5	10.0	210	30	73	BP316R7
OL737000**	1/4"	6.4	6	11.8	200	35	90	BP14R7
OL747000**	5/16"	8.0	8	14.3	190	45	128	BP516R7V
OL757000**	3/8"	9.7	10	16.0	175	55	155	BP38R7V
OL767000**	1/2"	13.0	12	20.3	140	75	219	BP12R7V
OL777000**	5/8"	16.0	16	23.5	105	120	277	BP58R7V
OL787000**	3/4"	19.2	19	26.5	90	145	330	BP34R7V
OL797000**	1"	25.6	25	33.6	70	200	403	BP1R7V

TECHNICAL FEATURES

Technical-constructive features:

Inner core in thermoplastic polyester, reinforcement in polyester textile and exterior covering in antiabrasion polyurethane stabilized against UV rays and resistant to hydrolysis and micro-organisms, suitable for outdoor applications in environments having high humidity and saline levels.

Applications:

Hoses of the OL7 Marine Series have been created for high pressure hydraulic applications in MARINE environments; this type of hose offers good flexibility at low temperatures and is particularly recommended for operating machines and lift trucks, which work at low temperatures.

Working temperature:

from -54°C to +100°C from -65°F to +212°F. Max. working temperature of air, water and water-based fluids is +70°C (158°F).

Working pressure:

Safety ratio 1:4

Vacuum rating:

0.93 bar; 700 mm Hg

Specifications:

These hoses meet or exceed SAE J517 sec. 100R7, ISO 3949 and DNV-GL, MSHA Standards.

**Lloyd's Register TYPE APPROVAL Hoses.

***The water-proof feature of the cover means that the hose is especially suitable for wet and saline environments where extreme temperature changes occur.**

OPTIONAL



Pin-pricking



Cover



Packing



Color



Multi-tube



Long Lenth

NORMATIVE

ISO 3949
LLOYD'S REGISTER TA
SAE J517-100 R7
MSHA

For any further information about the optional items, please contact the sales office
(vendite@zecspa.com -sales@zecspa.com)

OL8 Marine Series Thermoplastic hose - Water proof Cover*

- PRESSURE FROM 145 TO 420 BAR
- SAE 100R8, ISO 3949 - MSHA STANDARDS
- FOR HIGH PRESSURE USE IN ENVIRONMENTS HAVING HIGH LEVELS OF HUMIDITY



MARINE



HIGH PRESSURE



AIR



HYDRAULIC OIL



WATER-BASED FLUIDS



WATER

TECHNICAL FEATURES

Metric

Code	ID			OD	1:4 WP	R MIN	g	Ferrule Code
	inch	mm	DN	mm	bar	mm	g/m	
OL817000	1/8"	3.5	3	7.1	420	30	37	BP18OL5
OL8847000	5/32"	4.0	4	8.0	420	35	44	BP48OL5
OL827000	3/16"	4.8	5	10.0	350	35	86	BP316R7
OL837000	1/4"	6.4	6	11.8	350	50	97	BP14R7
OL847000	5/16"	8.0	8	14.3	325	60	126	BP516R7V
OL857000	3/8"	9.7	10	16.0	280	70	149	BP38R7V
OL867000	1/2"	13.0	12	20.3	245	95	225	BP12R7V
OL877000	5/8"	16.0	16	23.5	195	125	265	BP58R7V
OL887000	3/4"	19.2	19	26.5	165	150	352	BP34R7V
OL897000	1"	25.6	25	34.7	145	200	505	BP1R7V

TECHNICAL FEATURES

* Hose not provided for by SAE 100R8

Standard Technical-constructive features:

Inner core in thermoplastic polyester, high toughness textile fiber and exterior covering in antiabrasion polyurethane and resistant to stabilized hydrolysis for outdoor applications, in environments having high humidity and saline levels, stabilized against UV rays and microorganisms-resistant.

Applications:

hoses of the OL8 Marine Series have been created for high pressure hydraulic use for outdoor applications in MARINE environments having a high percentage of humidity.

Working temperature:

from -40°C to +100°C from -40°F to +212°F.

Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

Working pressure:

Safety ratio 1:4

Vacuum rating:

0.93 bar; 700 mm Hg

Specifications:

Hoses meet or exceed SAE J517 sect. SAE 100R8 – ISO 3949 - MSHA Standards.

**The water-proof feature of the cover means that the hose is especially suitable for wet and saline environments where there are extreme temperature changes.*

OPTIONAL



Pin-pricking



Cover



Packing



Color



Multi-tube



Long Lenth

NORMATIVE

ISO 3949

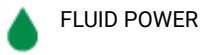
SAE J517-100 R8

MSHA

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OL7 Series thermoplastic hose - Oil proof Cover*

- PRESSURE FROM 70 TO 250 BAR
- SAE 100R7, ISO 3949 STANDARDS
- LLOYD'S REGISTER TYPE APPROVAL
- CREATED FOR MEDIUM PRESSURE HYDRAULIC USE



TECHNICAL FEATURES

Metric

Code	ID			OD	1:4 WP	R MIN	g	Ferrule Code
	inch	mm	DN	mm	bar	mm	g/m	
OL710000	1/8"	3.5	3	8.5	230	12	57	BP18R7
OL78940000	5/32"	4.0	4	8.9	250	25	58	BP532R7
**OL720000	3/16"	4.8	5	10.0	210	30	73	BP316R7
**OL730000	1/4"	6.4	6	11.8	200	35	90	BP14R7
**OL740000	5/16"	8.0	8	14.3	190	45	128	BP516R7V
**OL750000	3/8"	9.7	10	16.0	175	55	155	BP38R7V
**OL760100	1/2"	13.0	12	20.3	140	75	219	BP12R7V
**OL770100	5/8"	16.0	16	23.5	105	120	277	BP58R7V
**OL780100	3/4"	19.2	19	26.5	90	145	330	BP34R7V
**OL790100	1"	25.6	25	33.6	70	200	403	BP1R7V

TECHNICAL FEATURES

Technical-constructive features:

Inner core in thermoplastic polyester, polyester textile reinforcement and exterior covering in antiabrasion polyurethane, stabilized against UV rays and microorganisms-resistant, micro perforated on request for the conduction of air and compatible gases.

Applications:

Hoses of the OL7 Series have been created for medium pressure hydraulic use.

Working temperature:

from -40°C to +100°C from -40°F to +212°F. Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

Working pressure:

Safety ratio 1:4

Vacuum rating:

0.93 bar; 700 mm Hg

Specifications:

Hoses meet or exceed SAE J517 sect. SAE 100R7 – and ISO 3949 Standards.

** Lloyd's Register TYPE APPROVAL Hoses.

***The oil-proof feature of the cover means that the hose is resistant to prolonged contact with oils and lubricants.**

NORMATIVE

ISO 3949

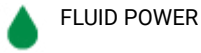
LLOYD'S REGISTER TA

SAE J517-100 R7

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OL8 Series thermoplastic hose - Oil proof Cover*

- PRESSURE FROM 145 TO 420 BAR
- SAE 100R8, ISO 3949 STANDARDS
- CREATED FOR HYDRAULIC USE AT HIGH PRESSURE



TECHNICAL FEATURES

Metric

Code	ID			OD	1:4 WP	R MIN	g	Ferrule Code
	inch	mm	DN	mm	bar	mm	g/m	
OL810000	1/8"	3.5	3	7.1	420	30	37	BP18OL5
OL8840000	5/32"	4.0	4	8.0	420	35	44	BP48OL5
OL820000	3/16"	4.8	5	10.0	350	35	72	BP316R7
OL830000	1/4"	6.4	6	11.8	350	50	85	BP14R7
** OL840000	5/16"	8.0	8	14.3	325	60	126	BP516R7V
OL850000	3/8"	9.7	10	16.0	280	70	146	BP38R7V
OL860100	1/2"	13.0	12	20.3	245	95	225	BP12R7V
OL870100	5/8"	16.0	16	23.5	195	125	265	BP58R7V
OL880100	3/4"	19.2	19	26.5	165	150	352	BP34R7V
OL890100	1"	25.6	25	34.7	145	200	505	BP1R7V

TECHNICAL FEATURES

Technical-constructive features:

Inner core in thermoplastic polyester, high toughness textile fiber and exterior covering in antiabrasion polyurethane, stabilized against UV rays and microorganisms-resistant, micro perforated on request for the conduction of air and compatible gases.

Applications:

hoses of the OL8 Series have been created for high pressure hydraulic use.

Working temperature:

from -40°C to +100°C from -40°F to +212°F.

Max. working temperature of air, water and water-based fluids is + 70°C (+158°F).

Working pressure:

Safety ratio 1:4

Vacuum rating:

0.93 bar; 700 mm Hg

Specifications:

Hoses meet or exceed SAE J517 Standard sect. SAE 100R8 – ISO 3949 Standard.

** Hose not provided for by SAE 100R8

***The oil-proof feature of the cover means that the hose is resistant to prolonged contact with oils and lubricants.**

NORMATIVE

ISO 3949

SAE J517-100 R8

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