

**TSS**

The **TSS** is the latest addition to the TST grommet range.

What makes the **TSS** different from existing products on the market are the built-in features that you do not find in this otherwise relatively simple product.

**TSS** handles an exceptionally large cable span.

It is the only "simple" grommet manufactured in a rubber-like material, and the only TPE-based end-plug.

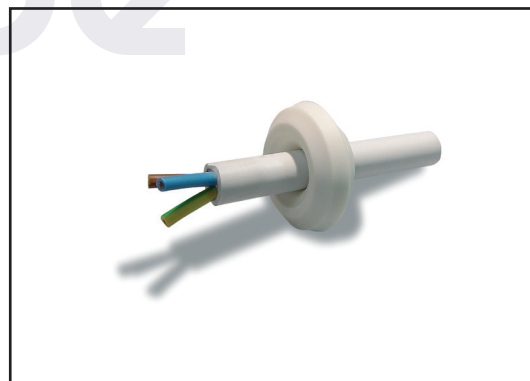
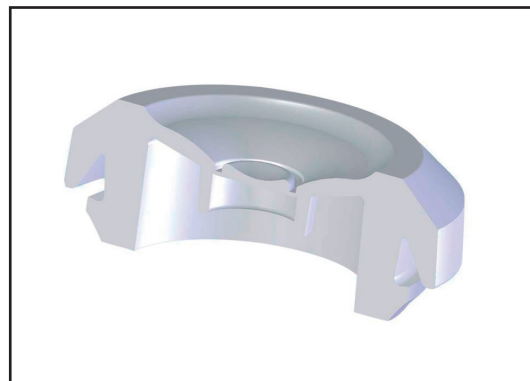
With the "**pushout**" membrane you always have a round opening and are guaranteed to have IP67.

The **TSS** is equipped with a sock that closes tight around the cable and allows for it to be moved around like a "**joy-stick**" in the opening without endangering the IP-classification. So it works extremely well with cables passing through at an angle.

The design makes sure that the grommet stays in place, even when large cables are installed.

These are some of the features that creates a lot of value added in the **TSS**, and makes it a unique product.

**TSS** is also available in a Multi-version for up to three cables and in V0-rated material.





## Product features TSS

**Ergonomic installation.**

**End-plug/grommet for all applications.**

**Self-adjusting to cable diameter.**

**Both Metric and PG programmes. Also available in V0 and Multi-versions.**

**Significant timesaving.**

**Handles exceptionally large cable-span 5 - 31 mm.**

**IP67 = Waterproof.**

**Suits material thickness 0,5 - 4,5 mm.**

**Secure installation in opening.**

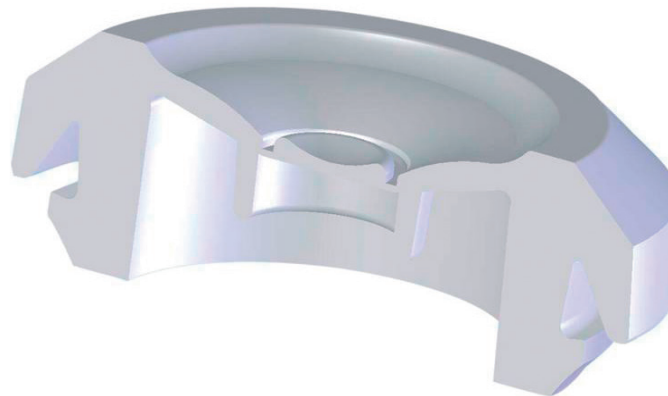
**Easy and fast installation.**

**Temperature range -50°C....+125°C.**

**"Joy-stick" effect thanks to built-in sock.**

**"Pushout" membrane.**

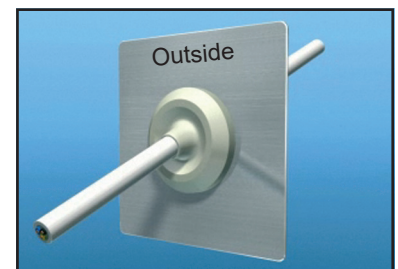
**Not for temporary use.**



*Push the grommet into the hole.*



*Pierce the grommet with the cable.*



**Material** TPE - Thermoplastic Elastomer  
Halogen Free  
UL listed material

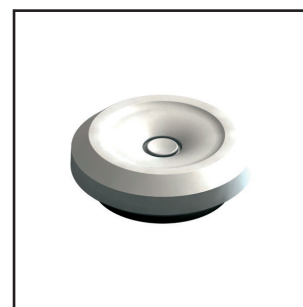
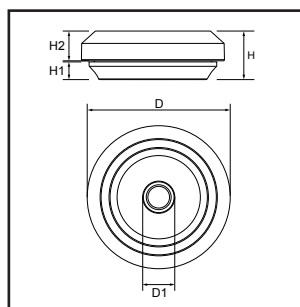
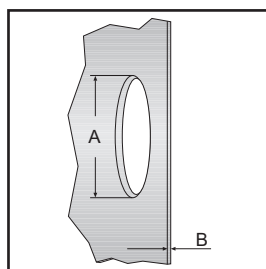
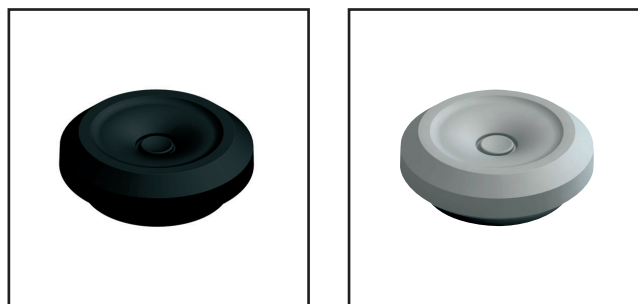
**Mode of protection** IP67

**Temperature range** -50°C....+125°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

- Quick and simple assembly without the use of tools
- Handles exceptionally large cable span
- An end-plug for all applications



Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D* mm	D1 mm	H mm	H1 mm	H2* mm	Pcs pack	
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### RAL 7035

T_14 757 11	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 12	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 13	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 14	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 15	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL 9005

T_14 757 16	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 17	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 18	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 19	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 20	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL 9010

T_14 757 21	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 22	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 23	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 24	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 25	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL XYZ

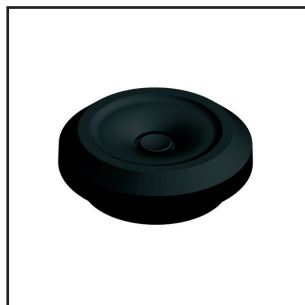
TSS M16 XYZ	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
TSS M20 XYZ	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
TSS M25 XYZ	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
TSS M32 XYZ	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
TSS M40 XYZ	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

\* Varies depending on the thickness of material installed in.

(1) Unstressed material.



# TSS PG



**Material** TPE - Thermoplastic Elastomer  
Halogen Free  
UL listed material

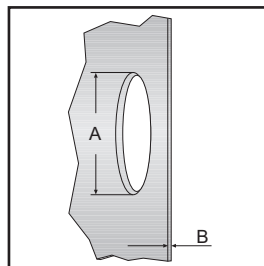
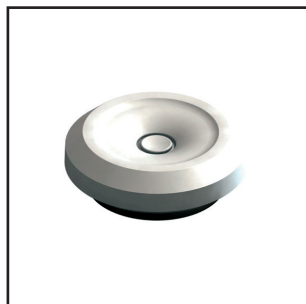
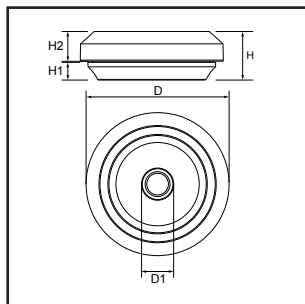
**Mode of protection** IP67

**Temperature range** -50°C....+125°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

- Quick and simple assembly without the use of tools
- Handles exceptionally large cable span
- An end-plug for all applications



Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D* mm	D1 mm	H mm	H1 mm	H2* mm	Pcs pack	
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## RAL 7035

T_14 757 32	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 33	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 34	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 35	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 36	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL 9005

T_14 757 37	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 38	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 39	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 40	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 41	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL 9010

T_14 757 42	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 43	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 44	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 45	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 46	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL XYZ

TSS PG9 XYZ	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
TSS PG11 XYZ	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
TSS PG16 XYZ	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
TSS PG21 XYZ	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
TSS PG29 XYZ	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

\* Varies depending on the thickness of material installed in.

(1) Unstressed material.

**Material** TPE - Thermoplastic Elastomer  
Halogen Free  
UL listed material

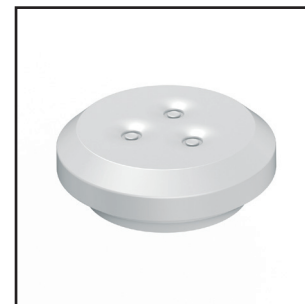
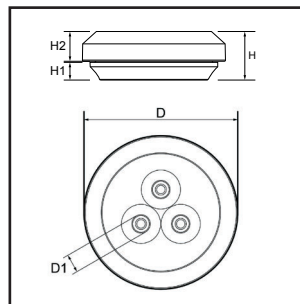
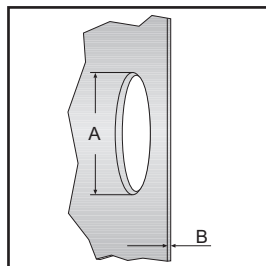
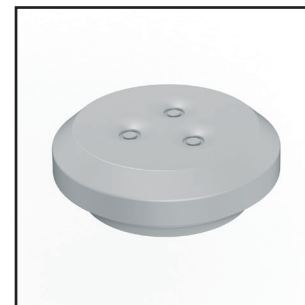
**Mode of protection** IP67


**Temperature range** -50°C....+125°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

- Quick and simple assembly without the use of tools
- Handles large cable span
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Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D* mm	D1 mm	H mm	H1 mm	H2* mm	Pcs pack	
<b>RAL 7035</b>											
T_14 757 26	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 27	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 47	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 48	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL 9005</b>											
T_14 757 28	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 29	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 49	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 50	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL 9010</b>											
T_14 757 30	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 31	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 51	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 52	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL XYZ</b>											
TSS MULTI M20 XYZ	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
TSS MULTI M25 XYZ	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
TSS MULTI PG11 XYZ	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
TSS MULTI PG16 XYZ	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500

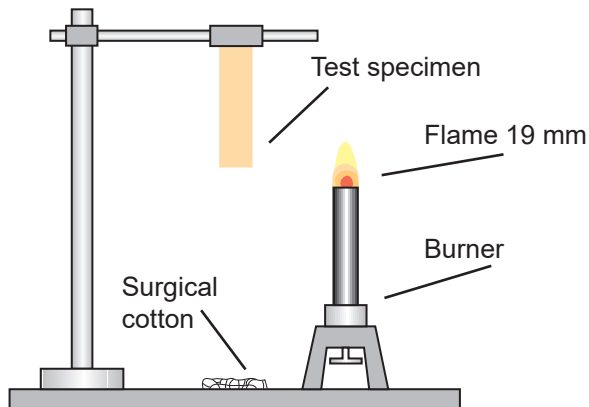
\* Varies depending on the thickness of material installed in.

(1) Unstressed material.

# Flammability Classification

## V - Vertical Burning

The test specimen length is 5" (127 mm) and width 0.5" (12.7 mm). The sheet to be tested cannot be more than 0.5" (12.7mm) thick. The sheet is fixed 1/4" from the upper end in a vertical position. A metal mesh covered with surgical cotton is positioned 12" (305 mm) beneath the test sheet. The flame of the burner used is adjusted so that it forms a 3/4" blue flame. The flame is directed from below at the lower edge of the plastic sheet at a distance of 3/8" (9.5 mm). The flame is applied for 10 seconds, after which it is removed. The burning time of the test specimen is recorded. Immediately the burning stops the flame is reapplied for 10 seconds. After removal of the flame the burning time and afterglow time is again noted. The entire test is carried out on five different test specimens.



The material tested is **UL 94 V0** classified if:

- 1) None of the five test specimen burn for over 10 seconds at any time when the burner flame is removed.
- 2) The total burning time of the 10 ignition test does not exceed 50 seconds.
- 3) No test specimen burns either with a flame or afterglow to the clamp.
- 4) No burning drops should fall which would cause the cotton underneath to ignite from any test specimen.
- 5) The afterglow burning of no test specimen exceeds 30 seconds.

The material tested is **UL 94 V1** classified if:

- 1) None of the five test specimen burn for over 30 seconds at any time when the burner flame is removed.
- 2) The total burning time of the 10 ignition test does not exceed 250 seconds.
- 3) No test specimen burns either with a flame or afterglow to the clamp.
- 4) No burning drops should fall which would cause the cotton underneath to ignite from any test specimen.
- 5) The afterglow burning of no test specimen exceeds 60 seconds.

The material tested is **UL 94 V2** classified if:

- 1) None of the five test specimen burn for over 30 seconds at any time when the burner flame is removed.
- 2) The total burning time of the 10 ignition test does not exceed 250 seconds.
- 3) No test specimen burns either with a flame or afterglow to the clamp.
- 4) Only such burning pieces may fall from the test specimen, which burn only momentarily, and of which some ignite the cotton underneath.
- 5) The afterglow burning of no test specimen exceeds 60 seconds.

**HB:** slow burning on a horizontal specimen;

The test specimen length is 5" (125 mm) x Width 0,5" (13 mm) x Thickness -- typically 1/16" (1.5 mm) or 1/8" (3.0 mm) or 1/4" (6.0 mm).

Three specimen of each thickness are tested after conditioning for 48 hours at 23 degrees C and 50% RH. Each specimen is mounted with its long axis horizontal and its short axis at a 45 degree angle. Each specimen is marked with two lines, 1" (25mm) and 4" (100mm) from one end of the specimen. Each specimen is supported at one end so that its lower edge is 2/5" (10mm) above a piece of wire gauze. A 4/5" (20mm) high blue Bunsen burner flame is applied to the free end of the specimen for 30 seconds and then removed. If the specimen continues to burn after the flame is removed, the time for the flame front to travel between the two gauge marks is measured and the burning rate calculated in millimeters per minute

The material tested is **UL94 HB** if;

- 1) The burning rate < 3" (76 mm)/min for thickness < 3 mm
- 2) The burning stops before the 4" mark (100 mm)



**Material** TPE V0 - Thermoplastic Elastomer  
Halogen Free  
UL listed material

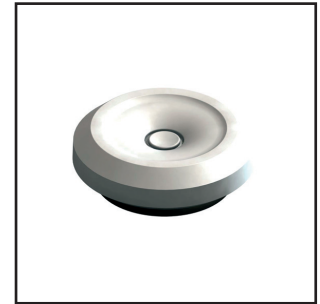
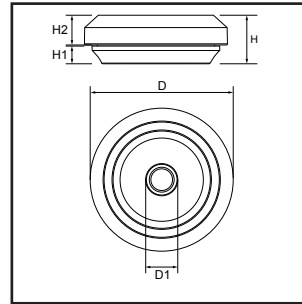
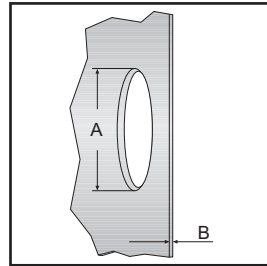
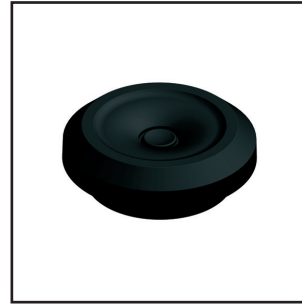
**Mode of protection** IP67

**Temperature range** -40°C....+80°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

- Quick and simple assembly without the use of tools
- Handles exceptionally large cable span
- An end-plug for all applications
- Material is UL 94 V0 classified



Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D* mm	D1 mm	H mm	H1 mm	H2* mm	Pcs pack	
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### RAL 7035

T_14 757 53	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 54	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 55	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 56	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 57	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL 9005

T_14 757 58	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 59	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 60	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 61	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 62	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL 9010

T_14 757 63	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
T_14 757 64	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
T_14 757 65	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
T_14 757 66	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
T_14 757 67	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

### RAL XYZ

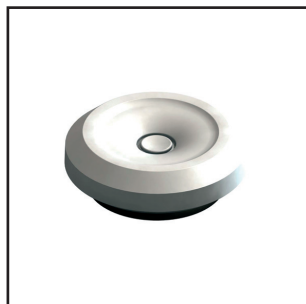
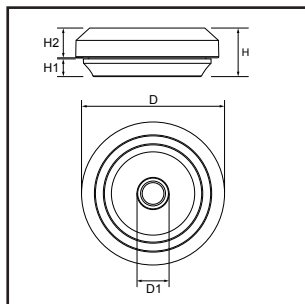
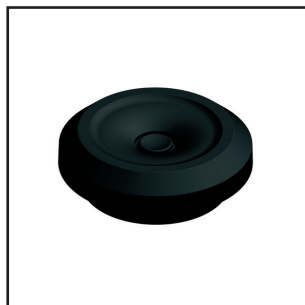
TSS M16 XYZ	M16	5 - 10	16,5	0,5 - 3	23,5	4	11	4	6,75	50	4000
TSS M20 XYZ	M20	6 - 13	20,5	0,5 - 3	27,5	5	11	4	6,75	50	3500
TSS M25 XYZ	M25	8 - 17	25,5	0,5 - 3,5	32,5	7	11	4	6,75	50	2500
TSS M32 XYZ	M32	12 - 24	32,5	0,5 - 4,5	39,5	11	11	4	6,75	25	1500
TSS M40 XYZ	M40	19 - 31	40,5	1,5 - 4,5	47,5	18	13,5	4,84	7,41	25	1000

\* Varies depending on the thickness of material installed in.

(1) Unstressed material.



# TSS PG V0



**Material** TPE V0 - Thermoplastic Elastomer  
Halogen Free  
UL listed material

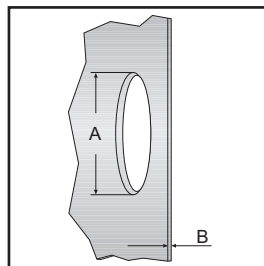
**Mode of protection** IP67

**Temperature range** -40°C....+80°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

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- An end-plug for all applications
- Material is UL 94 V0 classified



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## RAL 7035

T_14 757 74	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 75	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 76	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 77	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 78	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL 9005

T_14 757 79	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 80	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 81	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 82	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 83	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL 9010

T_14 757 84	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
T_14 757 85	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
T_14 757 86	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
T_14 757 87	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
T_14 757 88	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

## RAL XYZ

TSS PG9 XYZ	PG9	5 - 10	16	0,5 - 3	24	4	11	4	6,75	50	4000
TSS PG11 XYZ	PG11	6 - 12	19	0,5 - 3	26	5	11	4	6,75	50	3500
TSS PG16 XYZ	PG16	8 - 15	23	0,5 - 3,5	30	7	11	4	6,75	50	2500
TSS PG21 XYZ	PG21	10 - 20	29	0,5 - 4,5	36	9	11	4	6,75	25	1500
TSS PG29 XYZ	PG29	18 - 27	38	1,5 - 4,5	45	17	13,5	4,84	7,41	25	1000

\* Varies depending on the thickness of material installed in.

(1) Unstressed material.



**Material** TPE V0 - Thermoplastic Elastomer  
Halogen Free  
UL listed material

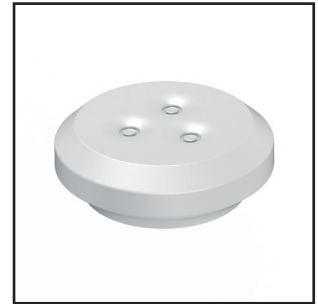
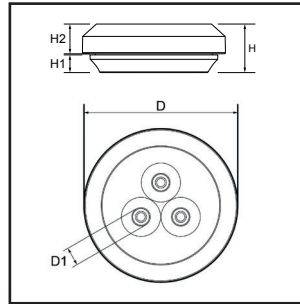
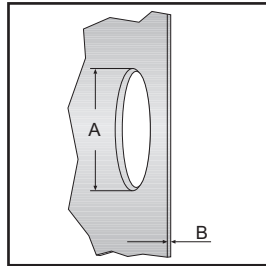
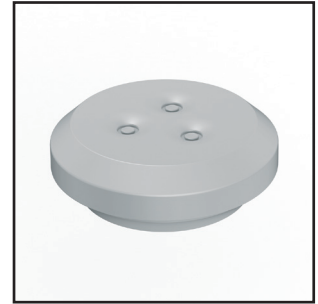
**Mode of protection** IP67


**Temperature range** -40°C....+80°C <sup>(1)</sup>

**Test standard** EN 60670-1:2005+A1:2013

**Semko report** 1619637

- Quick and simple assembly without the use of tools
- Handles large cable span
- An end-plug for all applications
- Material is UL 94 V0 classified



Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D* mm	D1 mm	H mm	H1 mm	H2* mm	Pcs pack	
<b>RAL 7035</b>											
T_14 757 68	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 69	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 89	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 90	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL 9005</b>											
T_14 757 70	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 71	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 91	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 92	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL 9010</b>											
T_14 757 72	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
T_14 757 73	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
T_14 757 93	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
T_14 757 94	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500
<b>RAL XYZ</b>											
TSS MULTI M20 XYZ	M20	3x 4 - 7	20,5	0,5 - 3	27,5	3	11	4	6,75	50	3500
TSS MULTI M25 XYZ	M25	3x 4 - 9	25,5	0,5 - 3,5	32,5	3	11	4	6,75	50	2500
TSS MULTI PG11 XYZ	PG11	3x 4 - 6	19	0,5 - 3	26	3	11	4	6,75	50	3500
TSS MULTI PG16 XYZ	PG16	3x 4 - 8	23	0,5 - 3,5	30	3	11	4	6,75	50	2500

NA - Not available at time of printing

\* Varies depending on the thickness of material installed in.

(1) Unstressed material.