

## GENERAL

This User's Manual has been drawn up in accordance with:

- Technical requirements for equipment and protective systems intended for use in potentially explosive atmospheres (2014/34/EU).
- Technical requirements for products from the point of their electromagnetic compatibility (2014/30/EU).

SAFETY GUIDELINES AND IMPROPER USE

- When handling the reductions and plugs, avoid causing mechanical damage, especially to the threaded parts!
- In Ex d enclosures (flame-proof enclosure), using the plug in connection with the reduction is not allowed!
- You can only use one reduction for each entry in the enclosure!
- The thread hole for the reduction/plug must always be perpendicular to the contact surface of the reduction/plug!
- Always use only original seals supplied by the manufacturer!
- Carry out storage, transport, assembly, installation, revision, preventive maintenance, repairs and service in accordance with the instructions stated hereunder.

## 1. USE

Type "R" reductions and type "Z" plugs are designed for Group I and II explosion-proof electrical equipment in the Ex d, Ex r or Ex t explosion-proof design.

Type "R" reductions enable fitting of explosion-proof enclosures with cable glands with a different thread type than in the enclosure (e.g. in the case of a significant change of cable diameter, after equipment repairs or overhauls, etc.).

Type "Z" plugs are designed to blank unused (reserve) holes while maintaining the given type of explosion-proof design and the required ingress protection (IP).

## 2. TECHNICAL DATA

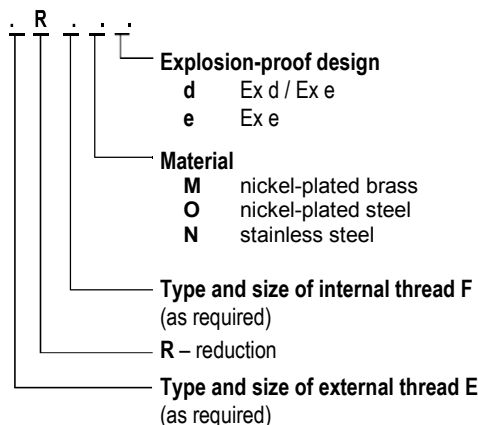
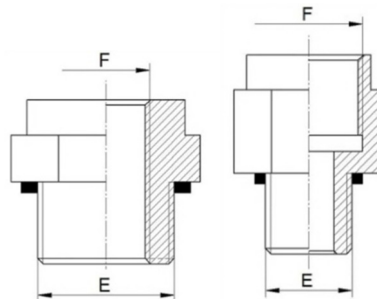
### 2.1. General

Name		Specification	Standard, note
Explosion-proof design	.R..d	Ex db I Mb / Ex eb I Mb	ČSN EN 60 079-0
	.Z..d	Ex db IIC Gb / Ex eb IIC Gb	ČSN EN 60 079-1
	.R..e	Ex tb IIIC Db	ČSN EN 60 079-7
	.Z..e		ČSN EN 60 079-31
Explosion-proof design	.R..e	Ex eb I Mb	ČSN EN 60 079-0
	.Z..e	Ex eb IIC Gb	ČSN EN 60 079-7
	.Z..e	Ex tb IIIC Db	ČSN EN 60 079-31
Degree of protection	IP 67 – All thread types except NPT. IP 64 – NPT IP 65 – NPT with a thread seal tape.		ČSN EN 60 529
Group and category	I M2 / II 2G / II 2D		2014/34/EU
Certification	FTZÚ 05 ATEX 0097		FTZÚ, NB 1026
Material	...O.	steel	nickel-plated
	...M.	brass	nickel-plated
	...N.	stainless steel	
Operating temperature	0°C to +85°C (I M2) -60°C to +85°C (II 2G, II 2D)		
Thread	M	- metric	ČSN ISO 68
	P	- armoured	ČSN 01 4035
	G	- straight pipe	ČSN EN ISO 228-1
	R	- taper pipe	ČSN ISO 7-1
	NPT	- taper	ANSI B1.20.1

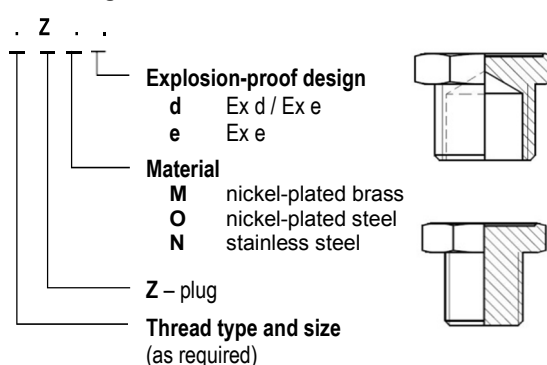
1) See type key

## 2.2. Type key

### 2.2.1. Reduction



### 2.2.2. Plugs



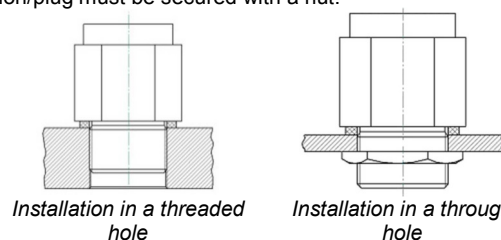
## 3. INSTALLATION INSTRUCTIONS

### 3.1. Attachment

The entry into the equipment must be in accordance with the requirements of the respective explosion-proof design and related standards. Especially at direct entry into the enclosure, where the reduction/plug thread forms a thread joint with the equipment thread, the thread entry into the equipment must meet the requirements of ČSN EN 60 079-1.

Before the actual installation, make sure both threads are not dirty or damaged. Then, screw in the reduction/plug into the prepared threaded hole and tighten it with the specified tightening torque (see section 3.2).

In the case of small thickness of the Ex enclosure wall and/or non-threaded holes (usable only for the secured version!), the reduction/plug must be secured with a nut.



### 3.3. Tightening torques

Type .R..de reductions and type .Z.de plugs:

Thread	Nm	Thread	Nm
M12*	24	NPT3/8	NPT3/8
M16	40	NPT1/2	90
M20	40	NPT3/4	90
M24, M25	55	NPT1	113
M32, M33, M36	65	NPT1-1/4	113
M40, M42	80	NPT1-1/2	113
M50	100	NPT2	181
M63	115	NPT2-1/2	181
M75	140	NPT3	181
M80	160	NPT3-1/2	181
M90	180		
M100	200		
M110	220		

\*Only for type M.Z..e plugs

Type .R..e reductions and type .Z.e plugs:

Thread	Nm	Thread	Nm	Thread	Nm
R3/8	40	P9	40	G3/8	40
R1/2	45	P11	40	G1/2	45
R3/4	60	P13.5	45	G3/4	60
R1	65	P16	50	G1	65
R1-1/4	85	P21	60	G1-1/4	85
R1-1/2	95	P36	75	G1-1/2	95
R2	110	P42	105	G2	110
R2-1/2	140	P48	110	G2-1/2	140
R3	175			G3	175
R4	220			G3-1/2	200
				G4	220

The presented values are maximum and cannot be exceeded.  
Reductions are based on the larger of both threads.

## 4. INSTALLATION ACCORDING TO APPLICABLE REGULATIONS

The decision to use explosion-proof type "R" reductions and type "S" plugs in explosion-proof electrical equipment must be in accordance with the above technical data, ČBU Decree No. 75/2002 Coll. (for Group I equipment) or ČSN EN 60 079-14 (for Group II equipment) and other related regulations.

## 5. REVISION AND PREVENTIVE MAINTENANCE

Revision and preventive maintenance of explosion-proof electrical equipment is stipulated by **ČBU Decree No. 75/2002 Coll.** (Group I), **ČSN EN 60 079-17** (Group II), unless specified otherwise by e.g. an decree, local regulations, etc.

For **mobile equipment**, we recommend to perform revisions **at least twice a year** according to Annex 2 to ČBU Decree No. 75/2002 Coll. (Group I) or ČSN EN 60 079-17 (Group II) at the level of detailed inspection.

## 6. REPAIRS AND GENERAL INSPECTIONS, SERVICE

Repairs and general inspections of **Group I** explosion-proof electrical equipment should be preferentially entrusted to the manufacturer or its authorized organization that has a valid authorization for this activity according to **ČBU Decree No. 74/2002 Coll.** For **Group II** explosion-proof electrical equipment, general inspections and service are governed by **ČSN EN 60079-19**. **Reductions and plugs are considered irreparable parts and must be replaced when damaged!**

**After their removal, use new original flat seals before re-installation!**

## 7. STORAGE, PACKAGING AND TRANSPORT

Reductions and plugs are to be **stored** at ambient temperatures of +5 °C to +40 °C, in non-aggressive indoor areas without exposure to UV radiation and the weather, in which the quality will not worsen (climate conditions 1K2, biological conditions 1B1, chemical active substances 1C2, mechanically active substances 1S1 and mechanical conditions 1M2 in accordance with ČSN EN 60 721-3-1).

Reductions and plugs are to be **packed** into protective foil and shipped in cardboard boxes.

**Transport** is generally provided by an express service within 24 hours, or according to the demands of the customer. C.O.D. is also

possible.

Transport conditions are 2K2, 2B1, 2C2, 2S1, 2M2 in accordance with ČSN EN 60 721-3-2.

## 8. DELIVERY TERMS AND CONDITIONS

The price of goods, delivery terms, payment method, and transport mode are stated in the order confirmation or purchase agreement, which the Sales Department sends out after obtaining an order form.

## 9. SPARE PARTS

- **Flat seals** for reductions and plugs with a cylindrical thread – seal specification based on the thread size

## 10. DISPOSAL OF THE PRODUCT



Dispose of unnecessary products in accordance with effective regulations.  
**!!! All components and parts may release harmful vapours when burning!!!**

## 11. DOCUMENTATION PROVIDED WITH THE PRODUCT

- ▣ EC Declaration of Conformity
- ▣ This User's Manual including the warranty
- ▣ Delivery note


The certificate is available at [www.generi.cz](http://www.generi.cz) or on request.

## WARRANTY

<b>Product:</b> (fill in specific type)
<b>Amount of units supplied:    Production series:</b>

This product is provided with a 12-month warranty (unless stated otherwise in the purchase agreement), commencing on the day it was accepted. We guarantee the quality of work and materials. Nevertheless, defects may arise as a result of storage, transport or use, which are undetectable in the production plant. If such defects have been incurred by defective material or production, we shall render the product into a perfect state at our own expense. The warranty does not apply to defects incurred by improper use, mechanical damages and by not adhering to the instructions for assembly and maintenance. Furthermore, the warranty does not apply to damage due to exceeded maximum permissible supply voltage.

FINAL INSPECTION		
Authorised worker:	Result:  <span style="font-size: 2em; font-weight: bold;">OK</span>	Stamp and signature:

 <b>GENERI, s.r.o.</b> Uničovská 50 787 01 ŠUMPERK Tel.: +4220583221500, Fax: +420583214183	<b>USER'S MANUAL</b>	Page: <b>3 of 3</b>
	<b>EXPLOSION-PROOF FLANGE CABLE GLANDS AND PLUGS</b> Type <b>R</b> (reductions) Type <b>Z</b> (plugs)	<b>N740061</b> – 4th edition Valid from: <b>2.8.2018</b>



**WE WISH YOU MAXIMUM SATISFACTION WITH OUR  
 PRODUCTS AND SERVICES**