




दिनांक एवं हस्ताक्षर SIGN & DATE		<b>उत्पाद क्रय विनिर्देश (हीप : हरिद्वार)</b> <b>PRODUCT PURCHASE SPECIFICATION</b> <b>(HEEP: HARIDWAR)</b>	TG 60690 पृष्ठ 6 का 1 Page 1 Of 6
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भारतीय इलेक्ट्रिकल लिमिटेड का संपत्ति है।  
 भारतीय इलेक्ट्रिकल लिमिटेड की संपत्ति है।

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स्वत्वाधिकार एवं गोपनीय  
 इस दस्तावेज में दी गई सूचना भारत इलेक्ट्रिकल लिमिटेड की संपत्ति है। इसका प्रयोग अन्य उद्देश्य के लिए या किसी भी प्रकार से बिना भारत इलेक्ट्रिकल लिमिटेड की अनुमति के नहीं किया जा सकता।

दिनांक एवं हस्ताक्षर  
SIGN & DATE  
 संख्या  
INVENTORY NO.  
 R6400

BASED ON OWN EXPERIENCE

**SOLENOID VALVE**

**1.0 SCOPE**

This specification covers the requirements of electromagnetic direct acting type of solenoid valve suitable for a pressure range of 0-40 bar. These valves shall be used in Gas Unit in H<sub>2</sub> gas line.

**2.0 APPLICATION**

There is no national standard pertaining of this item.

**3.0 DESIGNATION:**

A solenoid valve shall be designated as below:

**3.1 ON DRAWINGS AND INDENTS:**

Material specification column : TG60690  
 Description column : Solenoid valve  
 Material code column : W90414905652


**3.2 On Enquiries and purchase orders:**

In addition to incorporating the above information a copy of this specification shall be enclosed.

**4.0 COMPLIANCE WITH NATIONAL STANDRAD**

This standard is not based on any standard. Details have been taken from supplier's approved design.

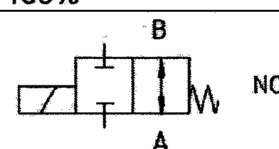
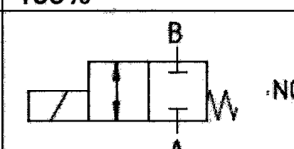
TSX	Lalit Kumar	Lalit Kumar	नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE
PSC MEMBER	R-K. Sharma	R-K. Sharma	अनुवादक TRANSLATED BY	
QAX	S.K. Bhandari	S.K. Bhandari	निर्माणकर्ता WORKED BY	KUNAL MISHRA
			जांचकर्ता CHECKED BY	MANJU AZAD
संलग्न विभाग AGREED DEPT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY	R. L. VYAS
<b>SUPERSEDES</b>			स्वीकृति APPROVED :	GR. NO.
REV.NO.	01		RAKSH KUMAR	3.40
DATE	23.06.2018		PREPARED : EME	ISSUED : TSX
Change Advice No.	TGE-18-21	11/07/18		DATE : 13.09.2010

नाम एवं दिनांक SIGN & DATE		<b>उत्पाद क्रय विनिर्देश (हीप : हरिद्वार)</b> <b>PRODUCT PURCHASE SPECIFICATION</b> (HEEP: HARIDWAR)	TG 60690 पृष्ठ 6 का 2 Page 2 Of 6
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SUPERSEDES INVENTORY  
 नाम एवं दिनांक  
SIGN & DATE

**5.0 TECHNICAL REQUIREMENT OF SOLENOID VALVE**

**5.1 SOLENOID VALVE DETAILS :**

Si no.	Description of Variables/Parameters	Details for Material Code W90414905652	Details for Material Code W90414907493
1.	Type	Electromagnetic Direct (DN40)	Electromagnetic Direct (DN10)
2.	Pressure	16 Bar	40 Bar
3.	End Connection	Flanged DN 40, PN16, DN EN 1092-1	G½ Threaded
4.	Function	Valve normally open i.e. open when not energized. It shall close when energized.	Valve normally closed i.e. closed when not energized. It shall open when energized.
5.	Flow rate	18.4 m³/hr	2.5 m³/hr
6.	Medium	Hydrogen	Hydrogen
7.	Material	Steel nickel plated	Steel nickel plated
8.	Gasket	VITON	VITON
9.	Ex-protection	Ex II 3GD Ex nA nC II T3	Ex II 3GD Ex nA nC II T3
10.	Media temperature	(-)20°C to (+) 80°C	(-)20°C to (+) 80°C
11.	Ambient temperature	(-)20°C to (+) 80°C	(-)20°C to (+) 80°C
12.	Nominal voltage	24V DC, +10% -15%	24V DC, +10% -15%
13.	Performance	49.7 W/2.07 A	38.4 W/1.6 A
14.	Insulation	Class H (180°C)	Class H (180°C)
15.	Protection	IP-65	IP-65
16.	On duration	100%	100%
17.	Wiring Diagram		
18.	Valve Dimensions	REFER FIGURE - 1	REFER FIGURE - 2

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 इस दस्तावेज में दी गई सूचना भारत भारती उपकरण लिमिटेड की संपत्ति है। इसका प्रयोग अन्य किसी उद्देश्य के लिए बिना भारत भारती उपकरण लिमिटेड की अनुमति के बिना न किया जाए।

नाम एवं दिनांक  
SIGN & DATE  
*21/06/18*

नाम एवं दिनांक  
SIGN & DATE  
*P-66/18*

REV. NO. 01		निर्माणकर्ता WORKED BY KUNAL MISHRA	<i>Kunal</i>	23/06/18
		जांचकर्ता CHECKED BY MANJU AZAD	<i>Manju</i>	23/06/18



**उत्पाद क्रय विनिर्देश (हीप : हरिद्वार)**  
**PRODUCT PURCHASE SPECIFICATION**  
**(HEEP: HARIDWAR)**

TG 60690  
 पृष्ठ 6 का 3  
 Page 3 Of 6

सर्वेक्षण  
 INSPECTION

सुपरसेड  
 INVENTORY

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संकेत  
 SIGN & DATE

संकेत  
 INVENTORY NO.

**5.2 INDUCTIVE SWITCH DETAILS :**

Si no.	Description of Variables/Parameters	Details for Material Code W90414905652	Details for Material Code W90414907493
1.	Realisation	2 switches, 1x valve open, 1x valve close	2 switches, 1x valve open, 1x valve close
2.	Ex-protection	Ex II 3G Ex nA II T4	Ex II 3G Ex nA II T4
3.	Rated operating voltage	24 V DC	24 V DC
4.	Rated current	200 mA	200 mA
5.	Sensing distance	1.5 mm	1.5 mm
6.	Casing material	Stainless steel	Stainless steel
7.	Pressure resistance	350 bar	350 bar
8.	Type of protection	IP68	IP68
9.	Ambient temperature	(-)25°C to (+) 80°C	(-)25°C to (+) 80°C
10.	Connector type	BKS-B20-4-PU-05	BCC0A8A
11.	Wiring Diagram		

**6.0 INFORMATION REQUIRED ALONG WITH OFFER:**

- The following information should be supplied invariably along with the quotations:
- Assembly drawing of Solenoid Valve showing all items, overall and fixing dimension, components, along with bill of material.
  - List of recommended spares required for smooth running of the equipment for a period of five years.
  - Catalogue of the equipment offered.

**7.0 QUALITY REQUIREMENTS:**

Following minimum checks/tests shall be carried out by vendor during manufacturing and final inspection, in addition on their own comprehensive Quality Assurance Plans being followed at their works.

- Material for major components shall be tested as per applicable grade of material/specification for its chemical composition. Suitable NDT to ensure freedom from surface and subsurface defects shall be carried out.
- The co-axial valve shall be subjected to gas leakage test at 1 ½ times the specified maximum inlet pressure. No leakage is permitted.
- Performance testing of Co-axial Valve shall be carried out to conform to the requirements of the specification.
- Visual and dimensional examination of complete assembly.

REV. NO. 01	निर्माणकर्ता WORKED BY	KUNAL MISHRA		22/06/18
	जांचकर्ता CHECKED BY	MANJU AZAD		23/6/18

10/18/18







उत्पाद क्रय विनिर्देश (हीप : हरिद्वार)  
**PRODUCT PURCHASE SPECIFICATION**  
 (HEEP: HARIDWAR)

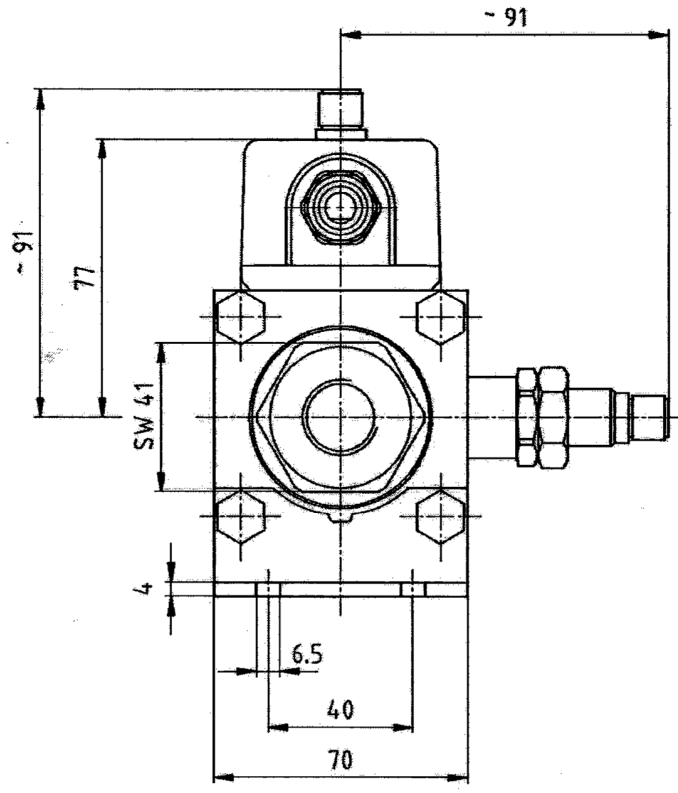
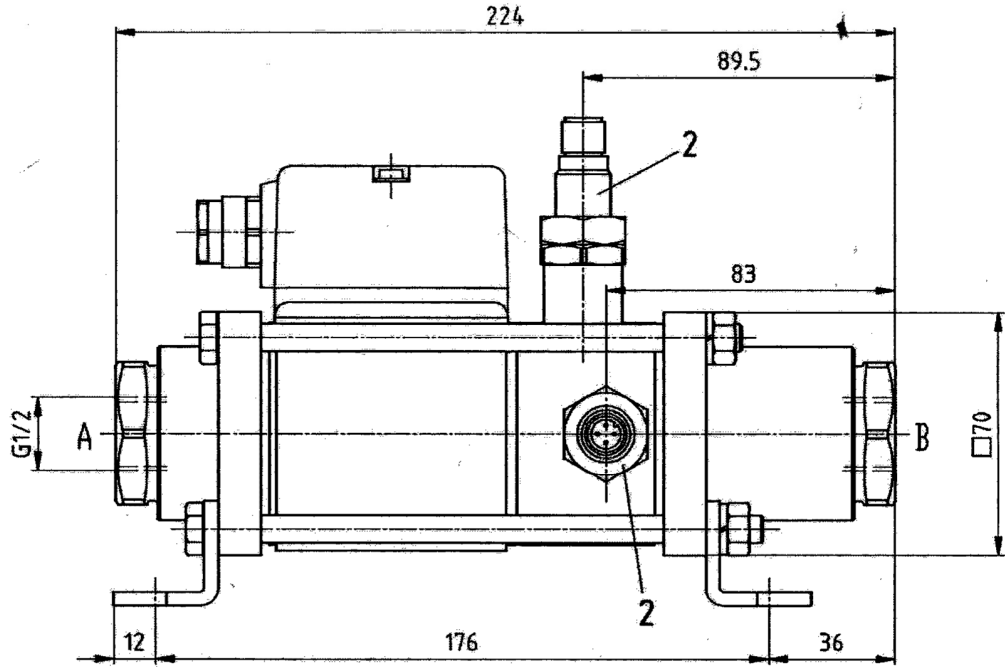
TG 60690  
 पृष्ठ 6 का 6  
 Page 6 Of 6

सुपरसेड्स  
 INVENTORY

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 एवं प्रकाशन बिना भारत भारती एलेक्ट्रिकल्स लिमिटेड की लिखित अनुमति के बिना  
 किया जा सकता है।

REV. NO. 01  
 23/06/18



**FIGURE-2**  
 (MATERIAL CODE- W90414907493)

REV. NO. 01

निर्माणकर्ता  
 WORKED BY

KUNAL MISHRA

23/06/18

जांचकर्ता  
 CHECKED BY

MANJU AZAD

23/6/18