



## 1. APPLICATION

May be used for flammable fluids (LNG/LPG) service, hydraulic oil, fuel oil, lubricating oil, inert gas, fresh water, sea water, sanitary, starting/control air, service air, brine, CO<sub>2</sub>, steam and refrigerants..

Two way ball valve has 2 ports, an inlet and an outlet, and a ball with a bore in it. They are operated by a manual hand lever to turn the ball 90 degrees, so that is called quarter turn ball valves or shut off valves.

They are one of the most common valves due to their simple operation, reliability, long service life, and wide range of application uses.

Various connection styles are available (threaded, flanged, etc.) for easy application installation. A threaded ball valve is the most common, as they are.

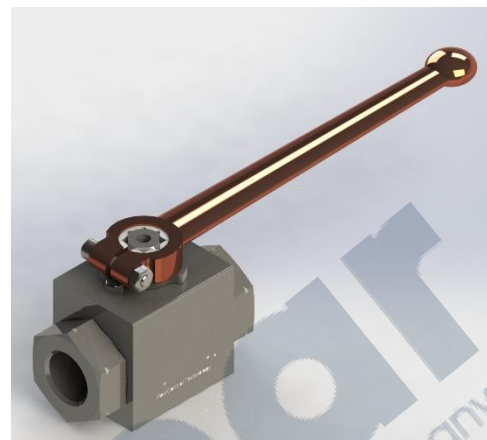


Figure 1.1

## 2. INSTALLATION

During installation 2 -way ball valve must fastening as seen as project drawing which given by ALMAR.

Be sure the 2 -way ball valve is not damaged.

End user is responsible for applying all safety precautions.

Before tighten 2 way ball valve use loctite and flaxen or PTFE-tape for tightness.

For sample of installed 2 way ball valve see fig2.1 (Shore Connection valve) and fig2.2 (Pilot valves in release station).

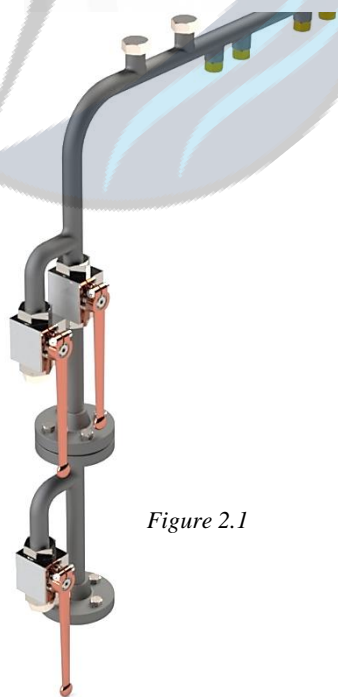


Figure 2.1

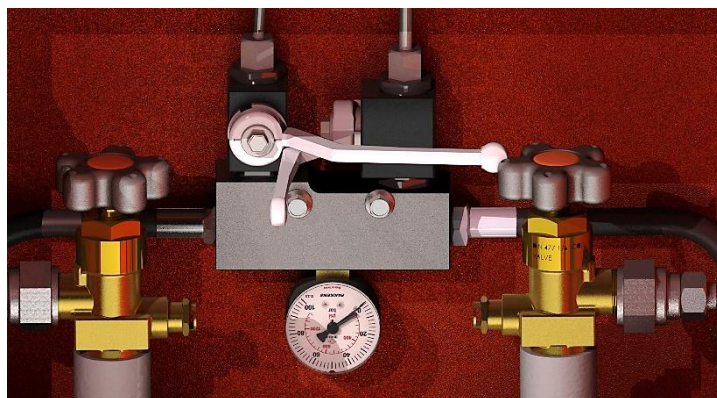


Figure 2.2



### 3. MECHANICAL PROPERTIES

DIN ISO 228 Female thread, ANSI B1.20.1 NPT Female thread, DIN 2353/ISO 8434-1 Light / Heavy series, SAE J 514/ISO/DIS11926-1 Female thread, ISO 7/1 Rc Female thread, ISO 8434-3 ORFS Male thread, others on request. Some of the material properties given at table 3.1 below.

METARIALS	BODY	STEEL/CHROME	T <sub>min</sub> / T <sub>max</sub>  -20 °C / 100 °C
	BALL	STEEL	
	STEAM	STEEL	
	BALL SEATS	POM	
	O-RINGS	NBR	

Table 3.1 Metarials

AL20-40018/ AL20-40019/ AL20-40020 has female thread on DIN ISO 228 standart. For connection type and more details of steel valves please see table 3.3 (e.g. AL20-40018S), for chrome (stainless) valves please see table 3.3(e.g. AL20-40018C).

GENERAL DIMENSIONS (DIN ISO 228 FEMALE THREAD)							
Product No.	Typ.	LW	L	i	D	WEIGHT(KG)	
AL20-40018S	DN4	40	26	47	33	13.5	
AL20-40019S	DN20	62	49	75	57	24.5	
AL20-40020S	DN25	66	58	83	65	29.5	
GENERAL DIMENSIONS (DIN ISO 228 FEMALE THREAD)							
Product No.	Typ.	LW	L	i	D	WEIGHT(KG)	
AL20-40018C	DN4	40	26	47	33	13.5	
AL20-40019C	DN20	62	49	75	57	24.5	
AL20-40020C	DN25	66	58	83	65	29.5	

Table 3.3 Thread Dimensions

### 4. MAINTANACE AND CERTIFICATIONS

If any 2 way ball valve is found to be in a poor condition, (rusty, damaged, etc.), please contact recognised service company.

Full maintenance should be performed by persons specially trained in the maintenance of such systems, e.g. manufacturer or recognised service company

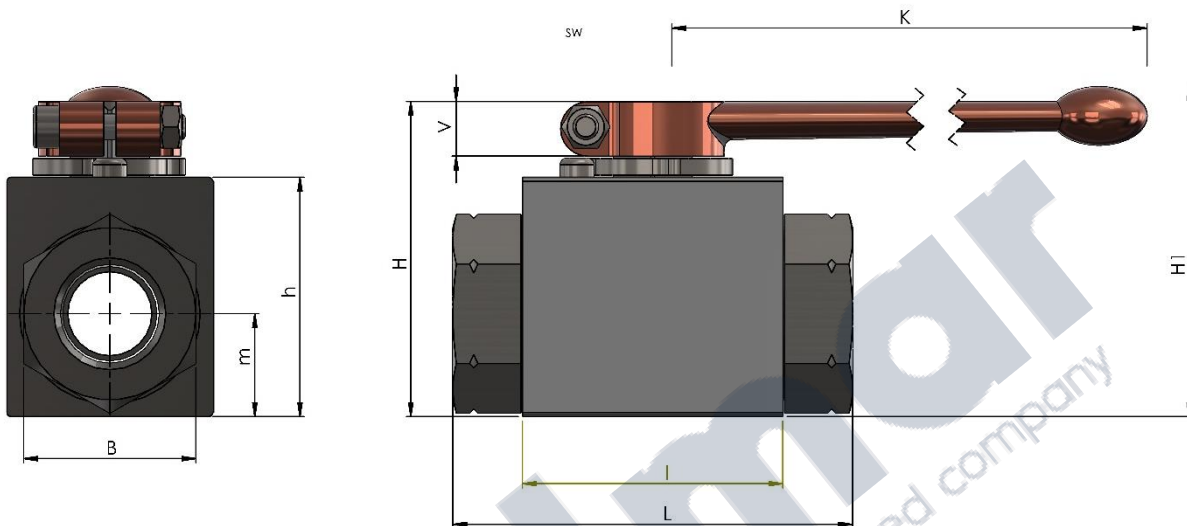
When it's necessary the following certificates can be issued :

- a. TYPE APPROVAL CERTIFICATE



**5. DIMENSIONS AND TECHNICAL DRAWINGS**

Dimensions are given at Table.5.1 below please see tables for each product.



GENERAL DIMENSIONS										
Product No.	Typ.	I	B	H	h	M	V	SW	K	H1
<b>AL20-40018</b>	DN4	40	26	47	33	13.5	11	9	115	
<b>AL20-40019</b>	DN20	62	49	75	57	24.5	14	14	200	79
<b>AL20-40020</b>	DN25	66	58	83	65	29.5	14	14	200	87

Table 5.1 Body Dimensions of Valve