



BE-LOK INSTRUMENT FITTING  
INC

# Air Header

100% Factory Tested For Both Crack & Reseal



Engineering Expertise

@ [www.be-lok.com](http://www.be-lok.com)

# Introduction

**BE-LOK INSTRUMENT FITTINGS INC.** A fast-growing manufacturing company spread across an area of 5500 m<sup>2</sup> (Meters Squared). We are having experience and expertise with advanced technology in design, development and production of high-quality fittings and valves for Instrumentation, Hydraulic, Chemical Injection and Oil & Gas Applications.

We are having state of the art manufacturing facility. We use the Latest manufacturing technologies for highest precision and lowest tolerance. Our well-equipped Manufacturing and Testing facilities is most comprehensive, technically advanced and system oriented.

We manufacture all our products in our own manufacturing facilities under strict quality assurance procedure.

Our products are in line with international specification requirements in quality, safety, consistency and reliability apart from the competitive price. We ensure that our products are quality checked before being shipped to our clients' location.

We are recognised by International Quality Management Systems & Certified by ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, PED 2014/68/EU, ASTM F1387-19, Interchangeability Test Report, MSS-SP-99-2016a etc.

As we are having 20% Market in Domestic Areas and have a 80% hold in international market.

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## Features

Maximum Number of Outlets- 20

Minimum Number of Outlets-4

SS316 as a standard material of construction. Other materials are available upon request.

Radiographic Testing & Liquid Penetrant Testing of Welds.

Maximum Working Pressure up to 6000 psi (414 bar).

Maximum Working Temperature up to 648°C (1200°F).

Leak-tight performance testing for every valve under nitrogen condition at the maximum working pressure.

Ball Valves & Needle Valves available for distribution lines and drain port.

A choice of high-quality valves and end connections, all manufactured by **BE-LOK®**

## General Information

An air distribution header is characterized by an inlet on one end, a drain on the other end, with multiple outlets on the sides. The inlet of the air header can be **BE-LOK®** ball valve or needle valve series for cutting off the process medium from all outlets of the air headers (this to be stated while ordering and identifying the types of valves). Air headers pipe made from the stainless steel thick-walled seamless tube is welded to the inlet of the air header.

The air header pipe can have up to 20 outlets.

Outlets of the air headers can have different threaded connections, weld connections, **BE-LOK®** compression fittings, and factory pre-installed ball or needle valves.

On the opposite side from the inlet connection, the air header can have a drain outlet with a threaded connection, a weld connection, **BE-LOK®** compression fitting, as well as factory-installed ball/needle valve or plug.

## Pressure Ratings

The pressure ratings of air header assemblies are based on the ratings of the distribution pipe, inlet flange and the valves selected for the inlet, outlet and drain. The component with the lowest pressure rating at any given temperature rating. The working pressure of the air header manifold assembly will be determined by its component with the lowest pressure rating.

These components may include following :

- Inlet Valve or Flange
- Distribution Pipe
- Outlet Valves
- Drain Valve
- Threaded or Welded Connection

For Pressure temperature ratings of ASME B16.5 flanges, see ASME B16.5 (2013) Table 2-2.3 & Table F2-2.2. For Pressure temperature ratings of EN 1092-1 flanges, see EN 1092-1 (2007) + A1 (2013) Table G.4.1-4 for PN 16, Table 4.1-5 for PN 25, Table G.4.1-6 for PN 40 & Table G.4.1-8 for PN 100.

## Temperature Ratings

Temperature ratings of air header assemblies are based on the ratings of the distribution pipe, inlet flange and the valves selected for the inlet, outlet and drain. The component with the lowest temperature rating at any given temperature limits the temperature rating. The valve with the most restrictive temperature rating limits the temperature rating.

The temperature ratings depends on the working temperature of the seat & Packing materials of inlet, outlet & drain valves.

- a) Ball Valves with Delrin Seats up to 85° C (185°F)
- b) Ball Valves with PCTFE up to 149°C (300°F)
- c) Ball Valves with modified PTFE up to 204°C(400°F)
- d) Ball Valves with PEEK up to 232°C (450°F)

# Types and Sizes of End Connections

Part	Type	Size	Standard
Inlet Connection	Male NPT	1/2" To 1"	ASME B1.20.1
	Female NPT		BS 21, ISO 1-7/1, EN 10226-1
	Male BSPT		BS 2779, ISO 228-1
	Female BSPT		EN 10272-5 Grade 1.4462
	Male BSPP	1/2" To 2"	Standard <b>BE-LOK</b> Tube Socket Weld Connections
	Female BSPP	1/2" To 2"	Standard <b>BE-LOK</b> Pipe Socket Weld Connections
	Flange		1" To 2" Class 150, Class 300, Class 600
PN 16, PN 25, PN 40 & PN 100			EN 1092-1
Distribution Pipe	Seamless Stainless Steel Pipe	1" To 2" SCH 40, SCH 80 & SCH 160	ASTM A312
Outlet Connection (Threaded/Needle Valve, Ball Valve)	Male NPT	1/4" To 1"	ASME B1.20.1
	Female NPT		BS 21, ISO 7/1, EN 10226-1
	Male BSPT		
	Female BSPT		
	Male BSPP		BS 2779, ISO 228-1
	Female BSPP		
	Fractional Tube Fitting	1/4" To 1" 6mm, 10mm, 12mm	Standard <b>BE-LOK</b> Tube Fitting 6mm, 10mm & 12mm
Drain Connection (Valve, Plug & Thread)	Female NPT	1/4" To 1/2"	ASME B1.20.1
	Male NPT		
	Female BSPT		BS 21, ISO 7/1, EN 10226-1
	Male BSPT		

1. Size & types listed are standard. Other sizes & types are available upon request, refer to the ordering information.
2. Valves at Inlet Connections are available upon request.

## Testing

Each Air Header is tested in a nitrogen gas chamber at 250 psi (17.2 bar) to ensure that there is no detectable leak with the specified leak deflection method. The tightness test of welds shall be carried out in accordance with Article 5 of ASME BPVC 6. Acceptance shall be carried out in accordance with ASME BPVC Section 8 Section 1 Appendix 8.

Radiographic Testing of welds as per ASME BPVC Section V Article 2 & Acceptance as per ASME BPVC Section VIII Division 1 UW-51.

## Selection of Air Header

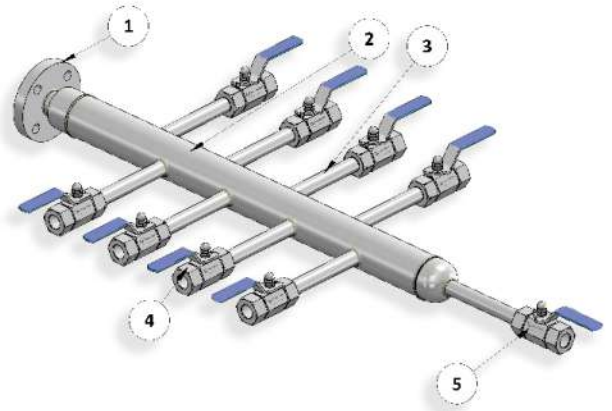
The first step in selecting an Air Header is determining the number & location of branch outlets. In standard air distribution header, branch outlets are available on both sides. Air Headers with branch outlets on only one side are available upon request. Standard **BE-LOK** Air Header is not provided with a general-purpose pressure gauge but it is available upon request. The air header can be ordered with or without a drain valve on the opposite end to drain the system. A variety of **BE-LOK** valves are available to meet temperature and pressure requirements of specific applications.

- a) **BE-LOK** Instrumentation Ball Valves
- b) **BE-LOK** Instrumentation Needle Valves

## Ball Valves Series Air Header

### Standard Material of Construction

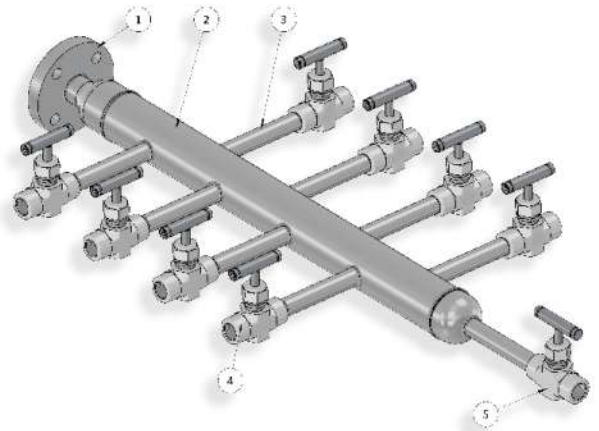
No	Component	Material
1	Inlet Flange	ASTM A 182 SS316
2	Distribution Pipe	ASTM A312-TP316
3	Outlets	ASTM A479-316 SS
4	Distribution Ball Valves	ASTM A479-316 SS
5	Drain Ball Valves	ASTM A479-316 SS



## Needle Valves Series Air Header

### Standard Material of Construction

No	Component	Material
1	Inlet Flange	ASTM A 182 SS316
2	Distribution Pipe	ASTM A312-TP316
3	Outlets	ASTM A479-316 SS
4	Distribution Needle Valves	ASTM A479-316 SS
5	Drain Needle Valves	ASTM A479-316 SS



# Ordering Information

## BAH-32-40-8-150SR-10-BV-8-NF-Y-SG

BE-LOK		Air Header		Pipe Size		Wall Thickness		Inlet Size		Inlet Type	
	Air Header	16	NPS 1 (DN25)	40	SCH40	4	1/4"	NM	NPT Male		
		32	NPS 2 (DN50)	80	SCH80	8	1/2"	NF	NPT Female		
				160	SCH160	12	3/4"	RM	BSPT Male		
				XXS	XXS	16	1"	RF	BSPT Female		
						20	1-1/4"	GM	BSPP Male		
						24	1-1/2"	GF	BSPP Female		
						32	2"	PSW	Pipe Socket Weld		
						DN 8	DN 8	TSW	Tube Socket Weld		
						DN 15	DN 15	150SR	Class 150RF Serrated Flange (ASME B16.5)		
						DN 20	DN 20	150SM	Class 150RF Smooth Flange (ASME B16.5)		
						DN 25	DN 25	300SR	Class 300RF Serrated Flange (ASME B16.5)		
						DN 32	DN 32	300SM	Class 300RF Smooth Flange (ASME B16.5)		
						DN 40	DN 40	600SR	Class 600RF Serrated Flange (ASME B16.5)		
						DN 50	DN 50	600SM	Class 600RF Smooth Flange (ASME B16.5)		
								900SR	Class 900RF Serrated Flange (ASME B16.5)		
								900SM	Class 900RF Smooth Flange (ASME B16.5)		
								1500SR	Class 1500RF Serrated Flange (ASME B16.5)		
								1500SM	Class 1500RF Smooth Flange (ASME B16.5)		
								BLK16SR	BLK 16RF Serrated Flange (EN1092-1)		
								BLK16SM	BLK 16RF Smooth Flange (EN1092-1)		
								BLK25SR	BLK 25RF Serrated Flange (EN1092-1)		
								BLK25SM	BLK 25RF Smooth Flange (EN1092-1)		
								BLK40SR	BLK 40RF Serrated Flange (EN1092-1)		
								BLK40SM	BLK 40RF Smooth Flange (EN1092-1)		
								BLK100SR	BLK 100RF Serrated Flange (EN1092-1)		
								BLK100SM	BLK 100RF Smooth Flange (EN1092-1)		

Continuous product development from time to time necessitate changes in the details contained in this catalogue. **BE-LOK®** reserves the right to make such changes at their discretion & without prior notice. For safe operation it is important to select the correct air header. Engineering departments of end-users shall be responsible for correct selection of air headers, their technical characteristics, material compatibility, correct installation, operation & maintenance. **BE-LOK®** shall not be responsible for incorrect product selection, installation, operation or technical service.

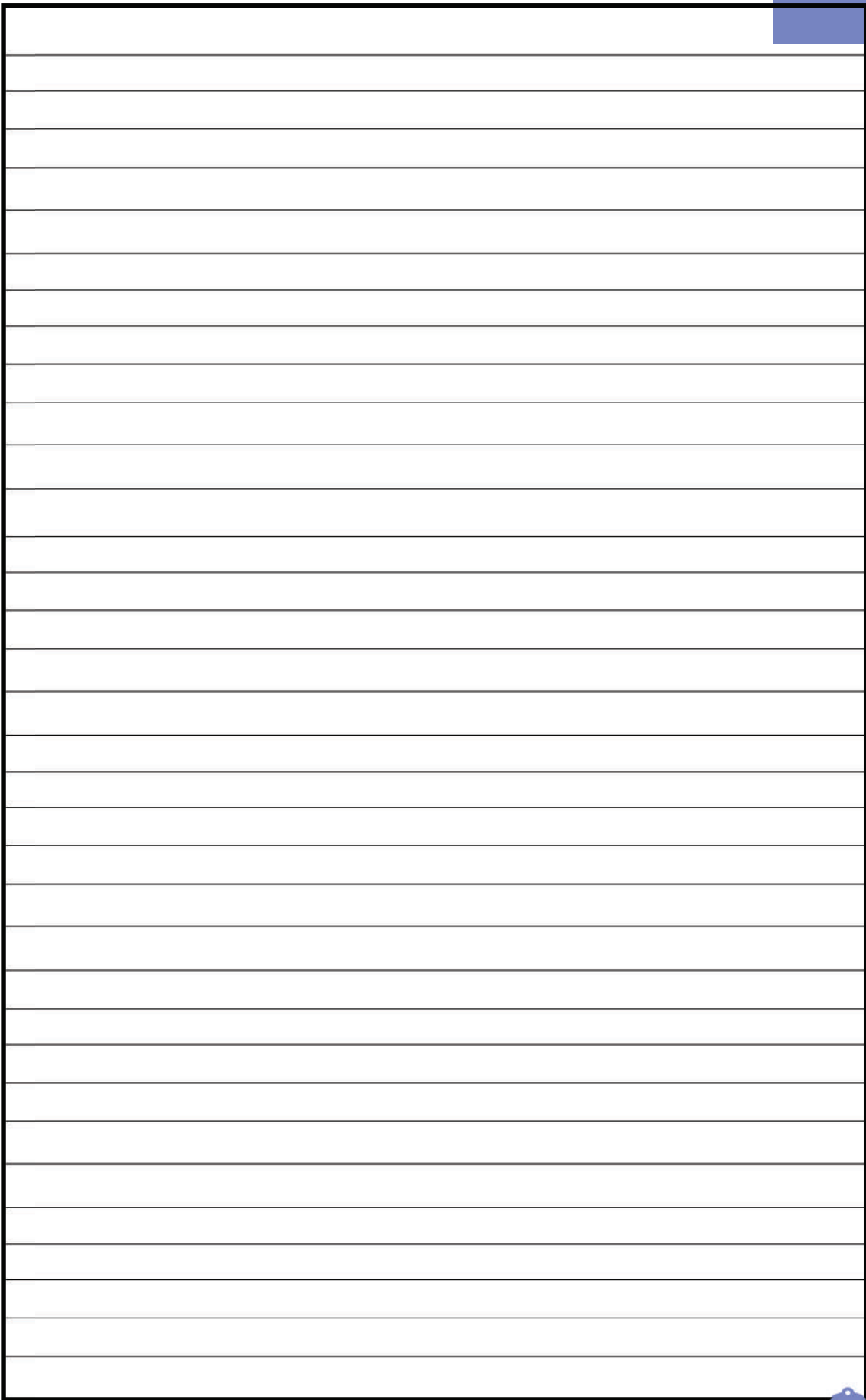
## 10-BV-8-NF-Y-0 0 0 0-SG

Outlet Qty.	Outlet Type	Outlet Size	Outlet Connection Type	Plug After Outlet	Drain Type	Drain Size
4*	BV Ball Valve	4 1/4"	NM NPT Male	No	Same As Outlet	Same As Outlet
6*	NV Needle Valve	8 1/2"	NF NPT Female	Y Yes	BV Ball Valve	4 1/4"
8*	P Male BSPT	12 3/4"	RM BSPT Male		NV Needle Valve	8 1/2"
10*	T Female BSPT	16 1"	RF BSPT Female		P Plug	12 3/4"
12*		M06 6 mm	GM BSPP Male		T Threaded	16 1"
14*		M10 10 mm	GF BSPP Female			M06 6mm
16*		M12 12 mm	OD Compression BE-LOK Tube Fitting			M10 10mm
18*						M12 12mm
20*						

\*While ordering an air header with one-sided arrangement of outlets, the index L is added to number of outlets. For example : 6L-6 outlets located on one side.

Drain Connection Type	Plug After Drain	Optional
Same As Outlet	Same As Outlet / No	SG NACE MR-01-75
NM NPT Male	Y Yes	
NF NPT Female		
RM BSPT Male		
RF BSPT Female		
GM BSPP Male		
GF BSPP Female		
OD Compression BE-LOK Tube Fitting		

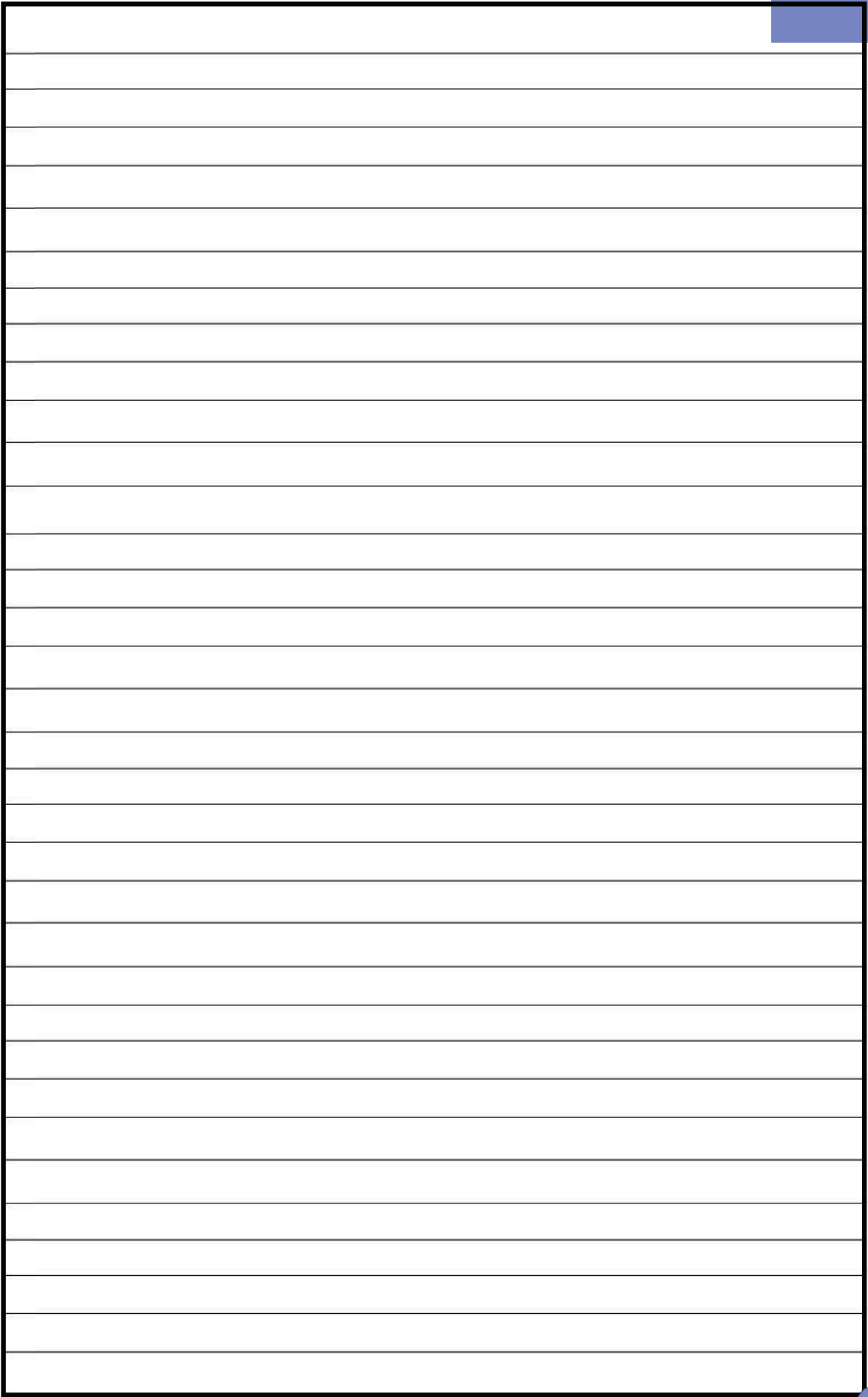
# Notes



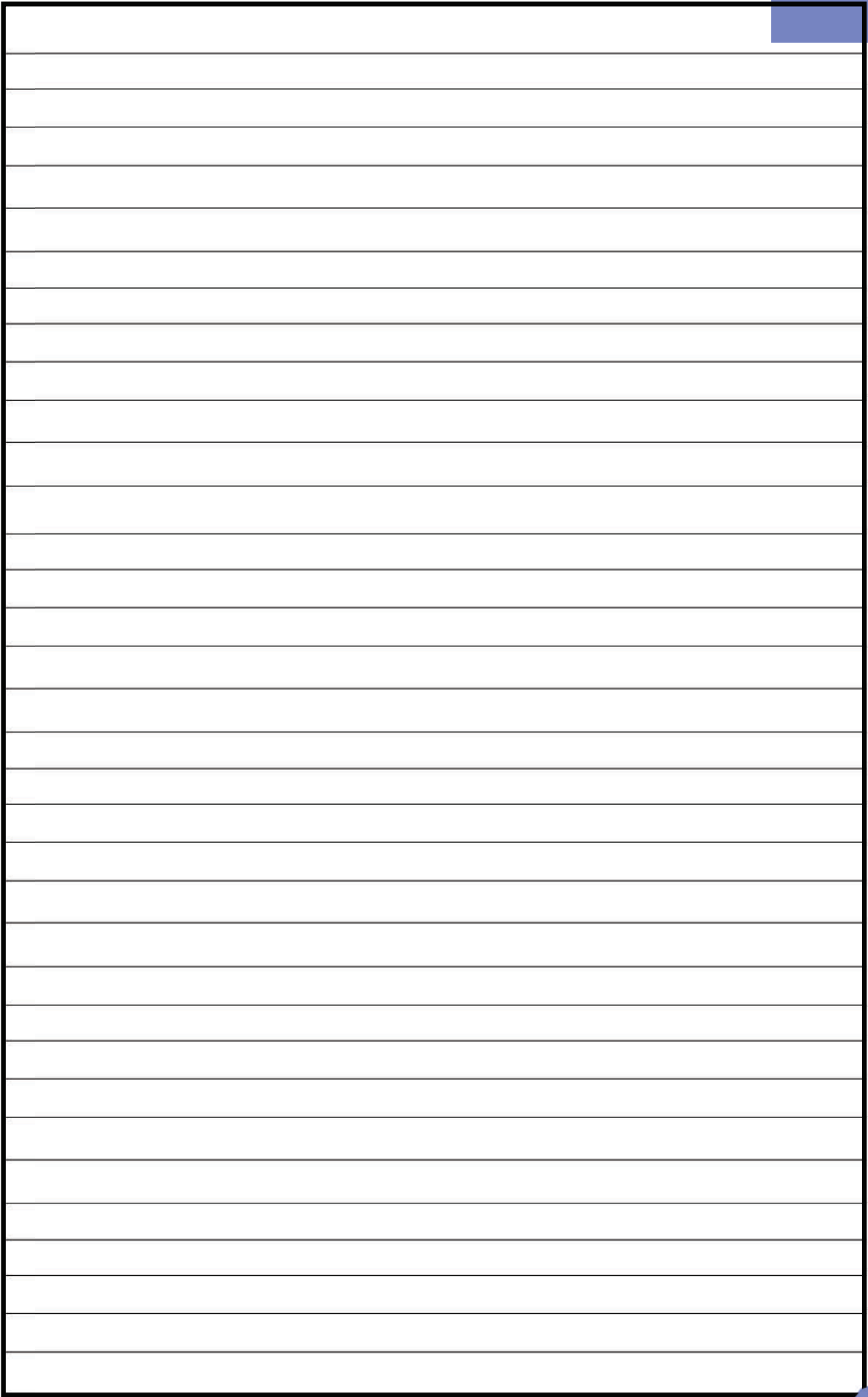
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# Notes

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# Products



**Flange Adapter**



**Pipe Fitting**



**Flare Fitting**



**Valve Manifold**



**Thermowells**



**Check Valve**



**Tube Fitting**



**Needle Valve**



**Weld Fitting**



**Swivel Adapter**



**High Pressure**



**Gauge Root**



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