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Gas Systems



kalde®

First Choice

Why Kalde?

Kalde produces high quality products, designs and develops integrated solutions for customers worldwide.

It is among the leading companies in production of pipes and fittings with its knowledge and expertise of more than 40 years.

The headquarters of the company is located in Istanbul where the continents of Asia and Europe meet.

Our strategical location at the junction of Europe, Asia and Africa together with a reliable supply chain give us unique advantages in providing our business partners and customers with high quality service as well as the competition in the global markets. Currently, our products are exported to more than 40 countries worldwide including Germany, Hungary, Romania, Austria, Greece, Bulgaria, Russia, Ukraine, Egypt, Syria, Lebanon, etc.

Kalde has product design, development and quality control facilities in 300.000 m².

Kalde produces a wide range of products including PP-R pipes, PP-R fittings, PP-R and brass valves, Al-pex & PE-RT pipes, screw fittings, press fittings, PE-X pipes and collectors. Kalde has internationally accredited certificates from respected organisations such as DVGW SKZ (Germany), CSTB (France) and AENOR (Spain). Furthermore, our management system has been certified by ISO. We are proud of our high quality products and experiences...

Our vision is providing our customers with an increasingly wide portfolio of high quality products and solutions with continuous research and development.

Our goal is to develop long term partnerships with our customers and suppliers.

We create integrated solutions by team work as well as collaboration with our customers and partners.

Having market-focused teams of around 1500 professionals supported by a strong management, we offer our business partners and customers worldwide with value-adding solutions.

As result of these reasons, **kalde** Kalde is the "First Choice" of the users worldwide

Kalde Value Commitment.

Kalde was established by four young engineers dedicated to provide customers with the best service in 1977.

This spirit is still alive and is the essence of our mission statement.

The Success of Kalde is the Result of Various Factors.

- **High quality** products.
- Utilization of best **practices**.
- Products meeting your **unique** requirements.
- **Proven** products.
- **Total** customer satisfaction.
- **Long term** relationships with each customer.
- A **dedicated** team of around 1500 professionals.

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Gas Systems

Inflex Stainless Steel Flex Hoses and Fittings (EN 15266)

EN 15266 European Standard, used in indoor gas installations; It is arranged to determine the material, design, manufacture and test methods of corrugated stainless steel pliable hose assemblies. This standard; It is applied to corrugated stainless steel flexible hose sets used for 1st, 2nd and 3rd family gases in residences, commercial and industrial gas installations.

High Flexibility and Strength

Kalde EN 15266 corrugated stainless steel pliable hose; has high flexibility; It consists of 2 basic layers of stainless steel hose and outer PVC coating.

Hose:

Stainless steel AISI 316L (1.4404), with a high degree of corrosion resistance, high flexible structure provides safe transportation of gas.

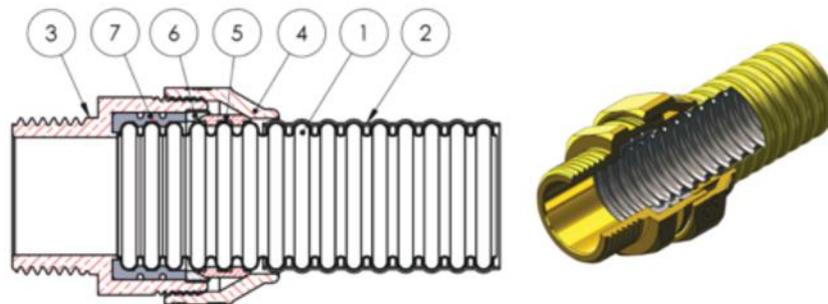
PVC Coating:

Yellow color PVC coating, hose protection from harmful external influences such as cleaning purposes.

Product Features

- Hose Type** : Parallel-necked (corrugated) stainless steel hose
- Hose Material** : According to EN ISO 10380 stainless steel AISI 316L (1.4404)
- Coating** : Soft yellow color PVC protects from household cleaners, and other harmful effects
- Fittings** : Copper alloy CW617N(CuZn40Pb2), CW614N(CuZn39Pb3) TS EN 12164, TS EN 12165

EN 15266 Corrugated Stainless Steel Pliable Hose Set



No	Part Name	Material
1	Hose	Stainless Steel 316L
2	Plastic Coating	Soft PVC
3	Fittings Body	Copper Alloy CW617N (CuZn40Pb2), CW614N (CuZn39Pb3), CW602N(CuZn36Pb2As)
4	Nut	Copper Alloy CW617N (CuZn40Pb2), CW614N (CuZn39Pb3), CW602N(CuZn36Pb2As)
5	Slotted Ring	Copper Alloy CW617N (CuZn40Pb2), CW614N (CuZn39Pb3), CW602N(CuZn36Pb2As)
6	Gasket Press Ring	Copper Alloy CW617N (CuZn40Pb2), CW614N (CuZn39Pb3), CW602N(CuZn36Pb2As)
7	Gasket	NBR

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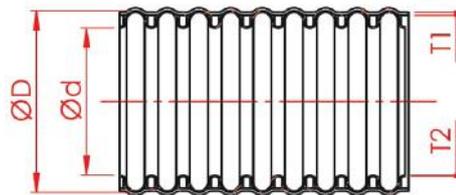
Kalde EN 15266 Stainless Steel Pliable Hoses Set Advantages

- It provides easy and flexible connection opportunity in indoor natural gas installation applications..
- It provides economy with its high service life.
- Thanks to its highly flexible structure allows for ease of installation and labor.
- All products used in this system (hose, fitting and PVC ducts, etc.) are resistant to corrosion, external influences and fire.
- PVC coating provides easy cleaning and hygienic cleaning with house cleaners.
- It guarantees the highest level of security for users in terms of features.
- Thanks to its minimum bending radius, it can be installed without cross sectional contraction.

Superiority of Inflex Hose Tools Against Iron Pipe Gas Installation

- INFLEX indoor gas installation is an economical connection system that saves time and labor. This connection system; compared to iron pipe applications; It provides great advantages in subjects that require extra workmanship such as carrying, cutting, fixing pipes to the wall. INFLEX hoses and fittings connections can be made more safely and quickly than iron pipe installation.
- This system; It consists of stainless steel flexible hose, fittings, carrier PVC channels, fixing and supporting elements and cutting tools. The inflex indoor gas installation is used comfortably and safely in both new buildings and modified indoor gas installations.
- Many 90 ° elbows and T-pieces are used on iron (rigid) pipe gas installations, providing corner turns. All these joints increase the possibility of gas leakage. It also increases the pressure drop. There is no need to use elbows in corner turns by means of inflex. This both reduces the possibility of gas leakage and prevents pressure drop.
- iron pipes and fittings used in iron pipe gas installations; In terms of their weight, they shorten the life of the building compared to the inflex hose sets.
- In buildings that are not destroyed and damaged during the earthquake, the flexible structure of the inflex hose does not break, but since the iron pipe installation is rigid, breaks and joints are easier to separate by the movement of the building. So they can cause gas leaks and fires.
- Another disadvantage of iron pipe gas installations; In case of an intervention in any part of the installation, the installation must be completely dismantled. This is not necessary in the inflex system.

EN 15266 Pliable Stainless Steel Flex Hose

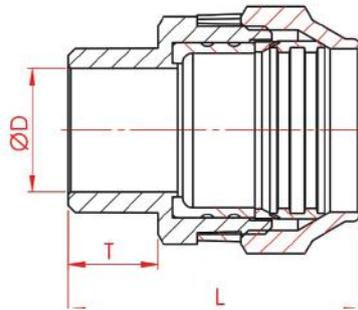


EN 15266 Pliable Stainless Steel Flex Hose					
Nominal Pressure, bar	MOP 0,5				
Nominal Diameter	DN	15	20	25	32
Hose Dimensions	Outside Diameter, ØD (mm)		26,5	31,4	
	Inside Diameter, Ød (mm)		20,7	25,2	
	Coating Thickness, T1 (mm)		0,50	0,50	
	Sheet Thickness, T2 (mm)		0,20	0,25	
Flow Rate of the Hose, m³/h			7,7	15,2	
Hoses Bending Radius, R min (mm)			25	30	

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Temperature	Pressure	Applications
°C	PN (Bar)	In door Natural Gas Applications
-20.....+60	0.5	

EN 15266 Pliable Stainless Steel Flex Hose Fittings



EN 15266 Pliable Stainless Steel Flex Hose Fittings					
Nominal Pressure, bar	MOP 0,5				
Nominal Diameter	DN	15	20	25	32
Dimensions	Inside Diameter, ØD (mm)		20	25	
	Nominal Treaded, R"		3/4"	1"	
	Treaded Length, T (mm)		16.3	19.1	
Flow Rate of the Fittings m ³ /h			7,7	15,2	
Fittings Sıkma Torkları, Nm			120	160	

Inflex Flex Hose Sets Mounting and Consideration Points

- 1- Take the inflex hose and fittings out of the package when you start the assembly.
Firstly, mount the carrier PVC channels where the hose will be placed on the wall. (Marking is recommended for proper installation of ducts.) These carrier ducts should be mounted on the wall with screws at intervals of max.75cm.
- 2- TS EN 15266 inflex hose sets can be used inside the building, in gas installations after the gasmeter. The installation must be made using pipes and fittings of the same brand.
Note: Do not use Kalde brand inflex hoses and fittings with other brands.
- 3- Application to be made with these hose sets; Valid for residences or installations with gas pressure of 21 mbar and domestic appliances (combi, stove, water heater, cooker).
- 4- The diameter of the corrugated pipe should not be changed with additional and / or reduction. Until T separation, installation should be one piece. Diameter can be changed if desired from T separation.
- 5- The valves used in the installation should be fixed with a clamp in order not to make an angular cycle.
- 6- Wall transitions should be made with a special PVC cover. The corrugated pipe should not be passed through the wall nakedly
- 7- The hose should not be bent to angles less than 90° . Min. bükme yarıçapları: DN20: 25 mm. DN25: 30 mm.

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- 8- After the gasmeter, the hose should be mounted to the installation so as not to prevent the gasmeter from being disassembled.
- 9- In all other buildings, except for detached buildings (buildings with 1 independent unit number 1), the corrugated pipe should not pass through the area open from the atmosphere (outside the building) (except balcony, terrace).
- 10- In places where there is a passage of installations from open spaces such as balconies, terraces or from the outer surface of individual buildings, the T-piece should not be exposed outside the building.
- 11- After the gasmeter, the line should enter the house from the shortest distance. However, in mandatory cases, corrugated pipe application in the stairwell and / or shaft can only be done with the approval of the gas distribution company.
- 12- If corrugated pipe is used in the installation after the meter, steel or copper pipe cannot be used in the same installation.
- 13- In the flexible hose application, while the pipe and fittings are being mounted; linen, natural gas paste, teflon, liquid gasket etc. additional materials should not be used.
- 14- Check the tightness of the joints of the hose and fittings as follows:
 - a) Test the installation with a pressure of 21 mbar (can be tested up to 500 mbar if desired) using air with the help of a U manometer (do not test the installation with water).
 - b) Air the gas installation, cover the joints with water and neutral soap bubbles. If there is not any bubble, the connection is valid otherwise, close the gas valve, check the gasket for damage, if necessary change the gaskets (gasket EN 549), screw the connections and make those steps again till the bubbles are not occurred. Do not test with compressor at the high pressures above 0,5 bar.

After proper connection Kalde guaranteed the daily usage of the hose. Kalde suggest that to cleaning the hose with non-metallic brush, water and soap. Avoid from corrosive material. Inflex hose does not need to maintenance.

- 15- Hoses sets have a 2-year warranty. In case of malfunction, hoses sets each part will be replaced free of charge during its warranty period. (Valid for manufacturing faulty.)
- 16- Hoses sets, as intended because it allows sufficient flow must be assured.
- 17- The maximum working pressure of Kalde inflex hoses is 0,5 bars. The minimum operating temperature is -20 °C, and the maximum operating temperature is 60 °C. Do not use the valves at higher pressures and outside of this temperature range.
- 18- In installation applications: existing local installation regulations and codes of practice should observed and be taken into consideration. (TS 7363).

Note 1: It is an obligation to make the earthing for if gas burner device with electric connections. Improper assembly/disassembly or misuse of the inflexhose assembly will void any warranty of the manufacturer.. It is suggested that the installation is done by only qualified and certified installers. Kalde inflexhoses must not exposed to any mechanical torsion.

Note 2: The damage of any part of the hoses sets, makes changing the whole hoses sets as an obligation. Modification on any part of hose makes fails the compilation of the standard (EN 15266).

Inflex Pliable Flex Hoses with Fittings Connecting



- 1- Cut the inflex hose properly with a special cutting scissors (without burr and deformation at the end of the hose). Twist the scissors around the hose, tightening a little more each turn.

Note 1: Cut the inflex hose only with special scissors. Jet stone, saw etc. never use tools.

Note 2: Do not pull the inflex hose out. Otherwise, the product will be out of warranty as its geometry will be damaged.

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- 2- Cut the plastic cover on the inflex hose (as the 6th node is outside) with a scraper tool. (by turning around the hose) Then remove the plastic cover by cutting parallel to the axis of the hose with a utility knife.

Note: Both operations can be done with a utility knife.



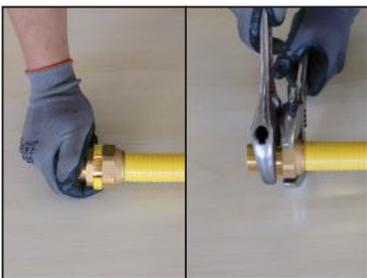
- 3- Fit the inflex hose to the end by pushing it into the body of the fitting. (as in the figure, up to the ring where the sheath is cut)

Note: Inadequate mounting places or not joining the hoses by pushing it to the fittings case, respectively; nut, slotted sleeve, (positioned on the fifth ondule) ring, gasket cen be mounted on the hose with the fitting.

Note: When you push the hose into the fitting can be used lubricant (soap etc.). (Do not used materials that may damage the hose).



- 4- Remove the yellow plastic ring on the fittings.



- 5- Screw the nut onto the body by hand first and take the gap. Then fix the body and screw the nut with a wrench.

Note: Do not deform the fittings by applying too much force.

Max. tightening torques; DN32: 250Nm, DN25: 160Nm, DN20: 120Nm, DN15: 90Nm



- 6- After the connection process is completed, gas the installation and check all the joints with soapy soap. If there is no leak, the installation can be used safely. Connection points with leakage should be disassembled and made to be leakproof again.

- 7- After the test control is completed, T fitting, nipple and gas valves should be fixed to the wall with a U clamp.

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Inflex Stainless Steel Flex Hoses and Fittings (EN 15266)

Flex Hose (EN 15266)

Code	Size	Pcs.
3871-ish-200000	ø20	50 m
3871-ish-250000	ø25	50 m



Nipple

Code	Size	Pcs.
3871-ign-200b00	ø20 x 1/2"	
3871-ign-200c00	ø20 x 3/4"	
3871-ign-250b00	ø25 x 1/2"	
3871-ign-250c00	ø25 x 3/4"	



Tee

Code	Size	Pcs.
3871-igt-202020	ø20 x 20 x 20	
3871-igt-252525	ø25 x 25 x 25	



Inegal Tee

Code	Size	Pcs.
3871-igt-202520	ø20 x 25 x 20	
3871-igt-252020	ø25 x 20 x 20	
3871-igt-252025	ø25 x 20 x 25	
3871-igt-252520	ø25 x 25 x 20	



Gas Counter Union with Test Nipple

Code	Size	Pcs.
3871-itn-251a00	ø25 x 1 1/4"	



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Metallic Ball Valve (Flat Foot - "L" Foot)

Code	Size	Pcs.
3871-ivd-200b00	ø20 x 1/2"	
3871-ivd-200c00	ø20 x 3/4"	
3871-ivd-250b00	ø25 x 1/2"	
3871-ivd-250c00	ø25 x 3/4"	

* Valve handle can be used both sides.



Fittings Clamp

Code	Size	Pcs.
3871-ifk-200000	ø20	
3871-ifk-250000	ø25	



Valf Clamp

Code	Size	Pcs.
3871-ivk-0b0000	1/2"	
3871-ivk-0c0000	3/4"	



Hoses Cutter

Code	Size	Pcs.
3871-ibm-000000	6 - 42 mm	



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PVC Tube and Fittings

Inflex Hoses Profile

Code	Size	Pcs.
3871-itp-002000	50x42 / 2000	



PVC L Corner

Code	Pcs.
3871-lks-000000	



PVC Inside Corner

Code	Pcs.
3871-iks-000000	



PVC Outside Corner

Code	Pcs.
3871-dks-000000	



PVC Perforated Te Cover

Code	Pcs.
3871-itk-000000	



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PVC Profile Coupling Cover

Code	Pcs.
3871-bks-000000	



PVC Wall Passing Cover (Open)

Code	Pcs.
3871-lda-000000	



PVC Wall Passing Cover (Close)

Code	Pcs.
3871-idk-000000	



PVC Counter Test Nipple Cover

Code	Pcs.
3871-lsk-000000	



PVC Wall Passing Part

Code	Pcs.
3871-ldp-000000	



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Boiler Flex DN16 Fitting - Nipel Connection (TS 13890)

Kalde flexible corrugated metal hose; in building, gas burning appliances (natural gas or LPG) is used to secure connections

High Flexibility and Strength

Kalde flexible corrugated metal hoses; Manufactured from stainless steel with high elasticity.

Hose:

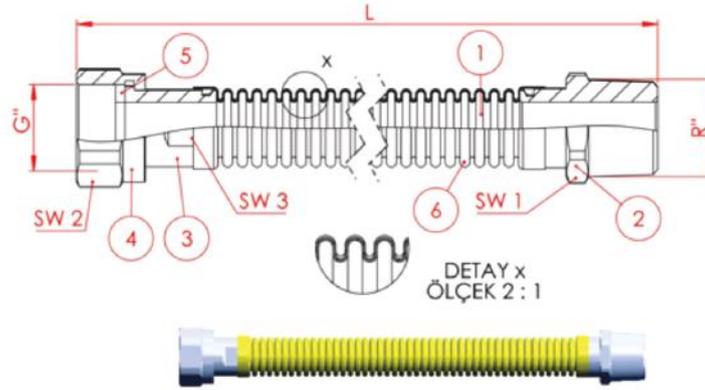
Stainless steel AISI 316L (1.4404), with a high degree of corrosion resistance, high flexible structure provides safe transportation of gas.

Product Features

Hose Type	: Parallel-necked (corrugated) metal hose
Hose Material	: According to EN 10088-2 stainless steel AISI 316L (1.4404)
Fittings	: AISI 303 - 304 Stainless Steel (TS EN 10088-2)
Unions Parts	: Nickel Coated Steel (TS EN 1562) or according to EN 12164 CW167N, CW614N

Advantages of Kalde Flexible Corrugated Metal Hoses

- Indoor use natural gas boiler as well as all applications, offer excellent connections.
- High service life thanks to provide affordability.
- Thanks to its highly flexible structure allows for ease of installation and labor.
- Features for users in terms of the highest level of security guarantees.
- Minimum bending radius can be installed without the contraction section, thanks.



No	Part Name	Material	Size
1	Hose Material	Stainless Steel 316L (1.4404)	3/4" x DN16
2	Nipple	AISI 303 - 304 Stainless Steel (TS EN 10088-2)	3/4"
3	Fittings	AISI 303 - 304 Stainless Steel (TS EN 10088-2)	3/4"
4	Nut	Nickel Coated Steel (TS EN 1562) or According to EN 12164 CW167N, CW614N	3/4"
5	Gasket	NBR	Ø24 x 7 x 3mm
6	Cover	Polyolefin Material	Yellow

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Stainless Steel Flex Hose	
Nominal Pressure	MOP 0,4
Flow Rate of The Hose, m ³ /h	6,0

Size	Connection Type; Male - Female	Length (mm)
DN 16	3/4" x 3/4"	400
		500
		600
		900

Boiler Flex DN16 Fitting - Nipel Connection (TS 13890)

Code	Size	Pcs.
3470-ffs-0c0400	3/4" x 400	60
3470-ffs-0c0500	3/4" x 500	60
3470-ffs-0c0600	3/4" x 600	60
3470-ffs-0c0900	3/4" x 900	60



Counter Flex DN25 SBFG4 Fitting - Nipel Connection

Kalde flexible corrugated metal hose; in building, gas counter devices (natural gas or LPG) is used to secure connections.

High Flexibility and Strength

Kalde flexible corrugated metal hoses; Manufactured from stainless steel with high elasticity.

Hose:

Stainless steel AISI 316L (1.4404), with a high degree of corrosion resistance, high flexible structure provides safe transportation of gas.

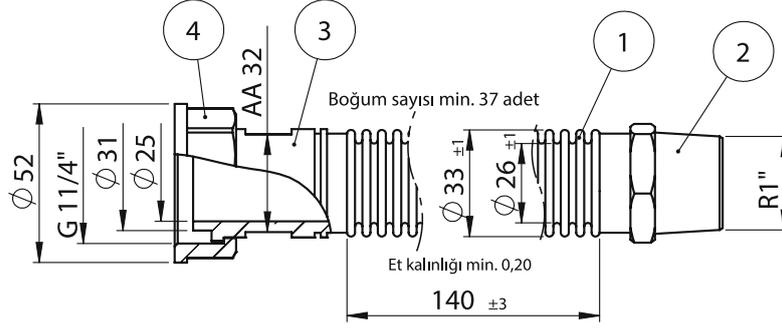
Product Features

Hose Type	: Parallel-necked (corrugated) metal hose
Hose Material	: According to EN 10088-2 stainless steel AISI 316L (1.4404)
Fittings	: AISI 303 - 304 Stainless Steel (TS EN 10088-2)
Unions Parts	: Nickel Coated Steel (TS EN 1562) or according to EN 12164 CW167N, CW614N

Advantages of Kalde Flexible Corrugated Metal Hoses

- Indoor use natural gas counter applications, offer excellent connections.
- High service life thanks to provide affordability.
- Thanks to its highly flexible structure allows for ease of installation and labor.
- Features for users in terms of the highest level of security guarantees.
- Minimum bending radius can be installed without the contraction section, thanks.

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No	Part Name	Material	Size
1	Hose Material	Stainless Steel 316L (1.4404)	1" x DN25
2	Nipple	AISI 303 - 304 Stainless Steel (TS EN 10088-2)	1"
3	Fittings	AISI 303 - 304 Stainless Steel (TS EN 10088-2)	1"
4	Nut	Nickel Coated Steel (TS EN 1562) or According to EN 12164 CW167N, CW614N	1 1/4"
5	Gasket	NBR	Ø38 x 31,5 x 3mm
6	Cover	Polyolefin Material	Yellow

Stainless Steel Gas Counter Flex Hose

Nominal Pressure **MOP 0,4**

Flow Rate of The Hose, m³/h **22,8**

Size	Connection Type; Male - Female	Lenght (mm)
DN 25	1" x 1 1/4"	235

Gas Counter Flex Hose

Code	Size	Pcs.
3470-psh-100000	1" x 1 1/4"	40



Gas Counter Mountage Set (with Test Hole)

Code	Size	Pcs.
3470-psd-100000	1" x 1 1/4"	20



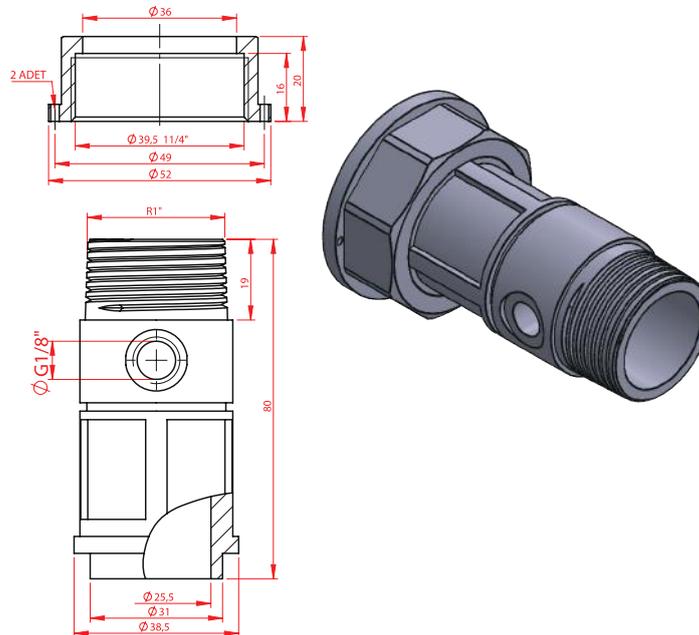
Gas Systems

Gas Counter Mountage Set

Code	Size	Pcs.
3470-pst-100000	1" x 1 1/4"	20



SBFG4 1" Gas Counter Unions with Test Hole



No	Part Name	Material	Size
1	Body Material	Stainless Steel	1" x 1 1/4"
2	Nut	Nickel Coated Steel	1"

Gas Counter Unions with Test Hole

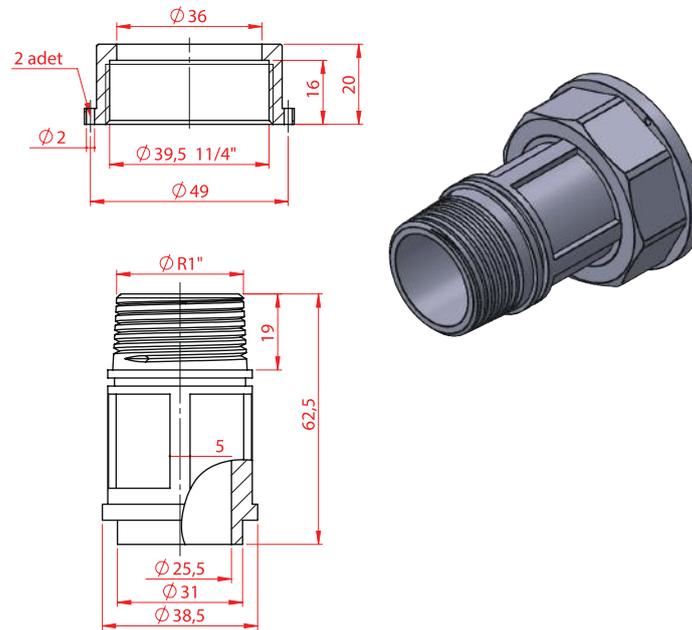
Nominal Pressure

MOP 0,4

Size	Connection Type; Male - Female	Lenght (mm)
DN 25	1" x 1 1/4"	80

Gas Systems

SBFG4 1" Gas Counter Unions



No	Part Name	Material	Size
1	Body Material	Stainless Steel	1" x 1 1/4"
2	Nut	Nickel Coated Steel	1"

Gas Counter Unions with Test Hole

Nominal Pressure

MOP 0,4

Size	Connection Type; Male - Female	Lenght (mm)
DN 25	1" x 1 1/4"	80

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Boiler and Gas Counter Flex Hose Assembly and Operating Instructions

- 1- Please install the boiler and Gas counter flex hoses according to limits length of hose. Unpack the hose only when you are going to connect it to the installation.
- 2- Wrap Teflon tape in accordance with the threads of the boiler and gasmeter hose on the nipple side. Then screw the boiler or gasmeter hose to the gas valve with a wrench. Then, screw the union on the other side of the hose to the device using the movable nut. (to the male thread on the boiler and the gasmeter) Excessive teflon or linen should not be used on the connection threads.
Note: When the flex hose is installed between the counter and the valve or boiler and valve, it should not be subjected to torsion. The hose should be located freely and easily accessible, in cases where any remove is required.
- 3- Check the tightness of the union and nipple connections as follows:
 - a) Cover the fittings with water and neutral soap foam.
 - b) Open the gas valve.
 - c) If there is not any bubble, the connection is valid otherwise, close the gas valve, check the gasket for damage, if necessary change the gaskets (gasket EN 549), screw the connections and make those steps again till the bubbles are not occurred.

After proper connection Kalde guaranteed the daily usage of the gas counter hose. Kalde suggest that to cleaning the hose with non-metallic brush, water and soap. Avoid from corrosive material. Boiler and Gas counter hose does not need to maintenance

- 4- Hose have a 2 year warranty. In case of malfunction, hose will be replaced free of charge during its warranty period.
- 5- The maximum working pressure of kalde boiler and gas counter hoses is 0,4 bars. The min. operating temp. is -20 °C, and the max. operating temperature is 60 °C. Do not use the gas counter hoses at higher pressures and outside of this temperature range
- 6- In installation applications; existing local installation regulations and codes of practice should observed and be taken into consideration.
Note 1: It is an obligation to make the earthing for if gas burner device with electric connections. Improper assemblage/disassemblage or usage makes the manufacturer guarantee invalid. It is suggested that the installation is done by only qualified installers. Kalde N-Gas counter hoses must not exposed to any mechanical torsion.
Note 2: The damage of any part of the hose makes changing the whole hose as an obligation. Modification on any part of hose makes fails the compilation of the standard.

Gas Systems

Stainless Steel Flex Hose (EN 14800)

European Standard EN 14800, used in building, gas appliances (natural gas or LPG) used for safe connection of corrugated flexible metal hose assembly performance, the material is arranged to identify and test methods.

High Flexibility and Strength

Kalde EN 14800 flexible metal hoses; highly flexible stainless steel tube, stainless steel wire mesh, and which comprises the outer PVC coating consists of 3 main layers.

Hose:

stainless steel AISI 316L (1.4404), AISI 304L (1.4306) with a high degree of corrosion resistance, high flexible structure provides safe transportation of gas.

Wire Mesh:

Stainless steel mesh AISI 304 (1.4301), which prevents overload and structure constitutes the second layer that protects them from mechanical damage.

PVC Coating:

Transparent PVC coating, hose protection from harmful external influences such as cleaning purposes.

Product Features

Hose Type	: Parallel-necked (corrugated) metal hose
Hose Material	: According to EN ISO 10380 Stainless Steel AISI 316L (1.4404)
Mesh Material	: Stainless Steel AISI 304 (1.4301)
Coating	: PVC protects from household cleaners, and other harmful effects.
Fittings	: Stainless Steel AISI 304 (1.4301)- AISI 303 (1.4305)
Standard	: EN 14800

Advantages of EN 14800 Kalde Hose

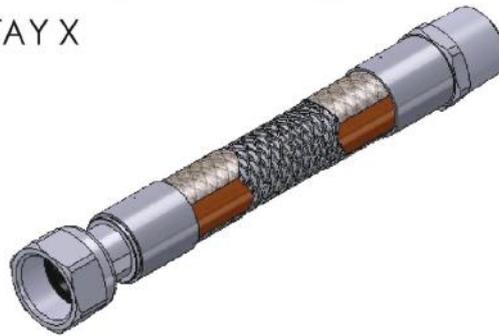
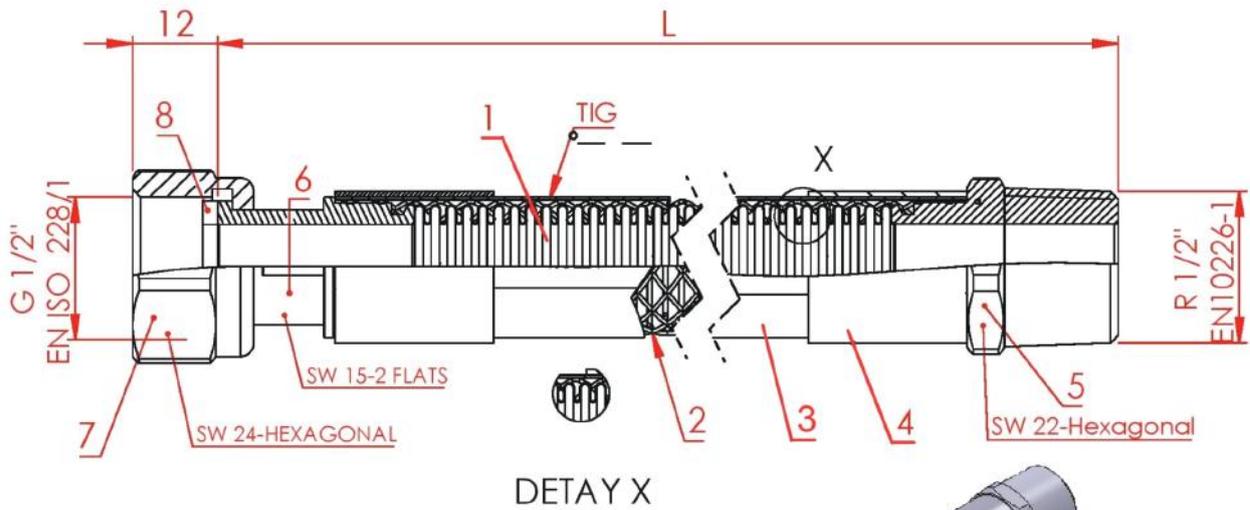
- Indoor use natural gas burning stoves, furnaces and ovens, as well as all applications, offer excellent connections.
- High service life thanks to provide affordability.
- Thanks to its highly flexible structure allows for ease of installation and labor.
- Features for users in terms of the highest level of security guarantees.
- 3-layer design, the corrosion and is resistant to external influences.
- PVC coating on the outer surface, hygienic and easy to clean with household cleaner keeps.
- Features for users in terms of the highest level of security guarantees.
- CE certified.
- Minimum bending radius can be installed without the contraction section, thanks.

Connection Types and Models

Kalde EN 14800 each country has its own natural gas flexible metal hose connectors are made of a variety specified by the institution.

Stainless Steel Flex Hose							
Nominal Pressure	MOP 0,5						
Nominal Diameter	DN	12					
Hose Dimensions	L (mm)	500	750	1000	1250	1500	2000
	R"	1/2"					
Flow Rate of The Hose, m ³ /h	2,75						

Gas Systems



No	Part Name	Material	Size
1	Hose Material	Stainless Steel 316L (1.4404)	1/2" × DN 12
2	Mesh Material	Stainless Steel 304 (1.4301)	0,24×4
3	Plastic Coating	Soft PVC	DN12
4	Rings	Stainless Steel 304 (1.4305)	21×20
5	Nipple	Stainless Steel 303-304 (1.4305 - 1.4301)	1/2"× DN 12
6	Fittings	Stainless Steel 303-304 (1.4305 - 1.4301)	1/2"
7	Loaf	Stainless Steel 303-304 (1.4305 - 1.4301) and CuZn40Pb2 (NICKEL COATED)	1/2" × DN 12
8	Gasket	NBR	18×12×2

Temperature	Pressure	Applications
°C	PN (Bar)	Natural Gas Systems (N-Gas) LPG Systems
-20.....+60	0.5	

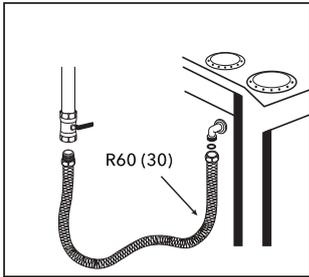
GASFlex (EN 14800)

Code	Size	Pcs.
3470-gmp-0b0500	1/2" x 500	50
3470-gmp-0b0750	1/2" x 750	50
3470-gmp-0b1000	1/2" x 1000	50
3470-gmp-0b1250	1/2" x 1250	25
3470-gmp-0b1500	1/2" x 1500	25
3470-gmp-0b2000	1/2" x 2000	20

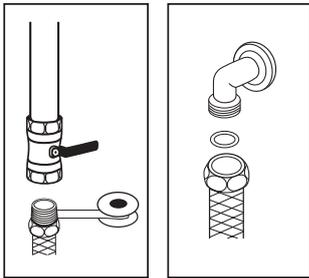


Gas Systems

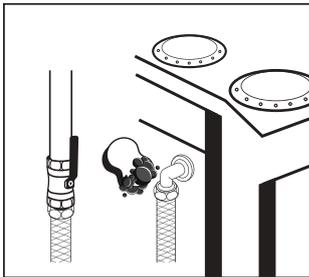
N-Gas Flex Hose Assembly and Operating Instructions (EN 14800)



1- Please install the N-Gas hose according to written limits on the hose. Please choose the suitable hose between gas valves and gas burner device. Unpack the hose only when you are going to connect it to the installation.



2- Please assemble the fittings to the suitable connection. For nipple connections, use enough teflon tape and screw it manually. For male connections, insert the gasket first and then screw it manually. Make the gas burner device connection like as valve connection and use screw-wrench to tightness. Teflon or linen should not be used on the connection screw.



3- Check the leakage by following those steps:
a. Cover the fittings with water and neutral soap foam.
b. Open the gas valve.
c. If there is not any bubble, the connection is correct otherwise, close the gas valve, check the gasket for damage, if necessary change the gaskets (gasket EN 549), screw the connections and make those steps again till the bubbles do not occurred.

After proper connection Kalde guaranteed the daily usage of the hose. Kalde suggest to clean the hose with sponge, water and soap. Avoid from corrosive material. Hose does not need any maintenance.

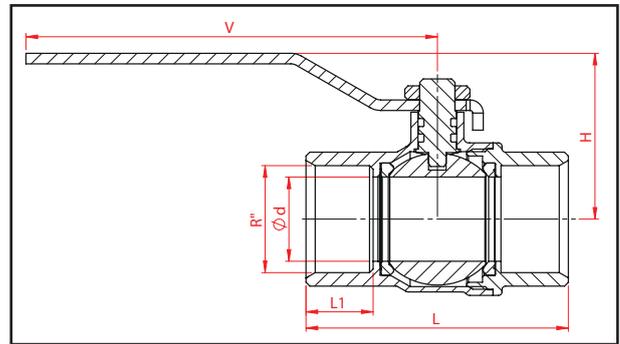
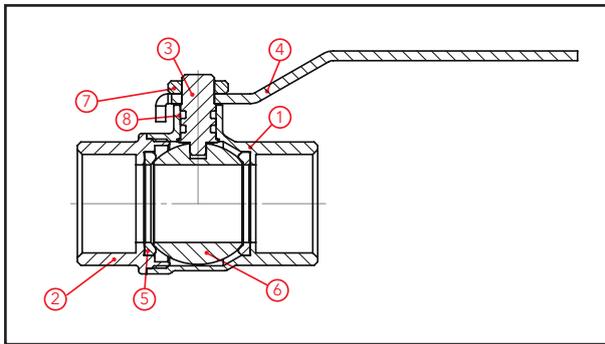
- 4- The hose has a 2-years warranty. In case of malfunction, the hose will be replaced free of charge during its warranty period.
- 5- Please avoid the hose torsion and assemble the hose to gas burner and then screw it in by tools. Start the connection from fixed fittings side and finish it with swiveling side.
- 6- Flexible metal hoses, as intended because it allows sufficient flow must be assured.
- 7- The maximum working pressure of kalde flexible metal hoses is 0,5 bars. The minimum operating temperature is -20 ° C, and the maximum operating temperature is 60 ° C. Do not use the valves at higher pressures and outside of this temperature range.
- 8- Installation applications: existing local installation regulations and codes of practice should observed and be taken into consideration.

Note 1: It is an obligation to make the grounding for the gas burner if the device is with electric connections. Improper assembly or disassembly or usage makes the manufacturer guarantee invalid. It is suggested that the installation is done by only qualified installers. Kalde N-Gas natural gas connection hoses should never be subjected to any mechanical torsion.

Note 2: The damage of any part of the hose requires the change the whole hose as an obligation. Modification on any part of the hose makes fail the compilation of the standard (EN 14800).

Gas Systems

Standard Type Gas Ball Valve



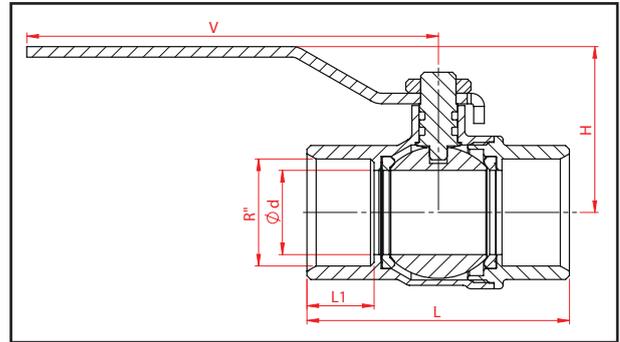
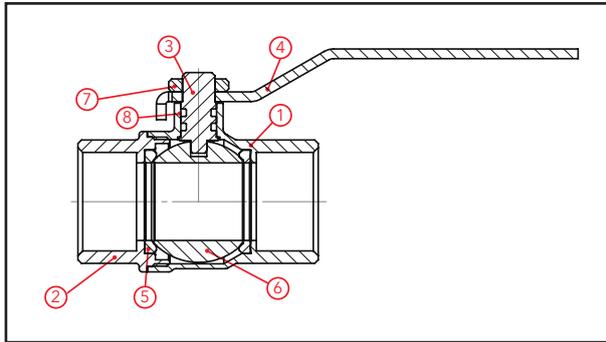
No	Part Name	Material
1	Body	CuZn40Pb2 (Nickel Coated)
2	Bonnet	CuZn40Pb2 (Nickel Coated)
3	Stem	CuZn39Pb3
4	Lever	St37
5	Seals	PTFE / TEFLON
6	Ball	CuZn40Pb2 (Nickel Coated)
7	Nut	St37
8	O-Ring	NBR

Nominal Pressure	MOP 0,5						
Nominal Diameter	DN	15	20	25	32	40	50
Valve Dimensions	d1 min.	14	19	24	30	40	49
	L ±0,5	53	62	73	83	98	118
	L1 ±1	89	89	111,5	111,5	126,5	126,5
	L2	15	16,5	19,1	21,5	21,5	26
	H	36	38,5	51	56	65	73,5
	R''	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Flow Rate, m ³ /h		9,5	16,6	22,8	35,5	60	99,4

Temperature	Pressure	Applications
°C	PN (Bar)	Natural Gas Systems LPG Systems Pressurized Air Systems
-20.....+60	0.5	

Gas Systems

Locking Type Gas Ball Valve



No	Part Name	Material
1	Body	CuZn40Pb2 (Nickel Coated)
2	Bonnet	CuZn40Pb2 (Nickel Coated)
3	Stem	CuZn39Pb3
4	Lever	St37
5	Seals	PTFE / TEFLON
6	Ball	CuZn40Pb2 (Nickel Coated)
7	Nut	St37
8	O-Ring	NBR
9	Lock	CuZn39Pb3

Nominal Pressure	MOP 0,5			
Nominal Diameter	DN	15	20	25
Valve Dimensions	d1 min.	14	19	24
	L ±0,5	53	62	73
	L1 ±1	89	89	111,5
	L2	15	16,5	19,1
	H	36	38,5	51
	R''	½"	¾"	1"
Flow Rate, m³/h		9,5	16,6	22,8

Temperature	Pressure	Applications
°C	PN (Bar)	Natural Gas Systems LPG Systems Pressurized Air Systems
-20.....+60	0.5	

Gas Systems

EN 331 Gas Ball Valve Assembly And Operating Instructions

- 1- Before assembly, remove all foreign material (sand, gravel, dirt, etc.) from the installation.
- 2- First connect one side of the valve to the installation. Then, without allowing the other side to cause tensile stress connect the other side as well.
- 3- The thread length at the end of the metal pipe or -fittings where the valve is to be connected should be shorter than the thread length at the exit and entrance of the valve. To connect pipe and valve do the following: Close the valve and tighten it at the mouth using a wrench. When sealing, do not use teflon and linen excessively because this can cause cracks in the body. Conical screw-threaded pipe cannot be connected to the valve.
- 4- Unpack the valve only when you are going to connect it to the installation.
- 5- Apply force to the valve levers only in the directions indicated by the arrow for opening and closing. When the lever is stopped by the restraint pin, stop applying force to the lever.
- 6- In natural gas, air and LPG installations, distribution and service valves are used. Arm color should be yellow.
- 7- Use the valve in fully open or in fully closed positions.
- 8- When assembling or removing the valve, use wrench openings in both sides. Do not assemble by applying force to the body of the valve.
- 9- All valve parts have a 2- year warranty. In case of malfunction, valve will be replaced free of charge during its warranty period. Do not lose your warranty documents.
- 10- Manually operated ball valve, deterioration of any part or is damaged, the valve will be replaced with a new one. Changes made in any part of the valve, the valve no longer be according to the rules of this standard means that performance.
- 11- Ball valves, as intended because it allows sufficient flow must be assured.
- 12- Malfunctions caused by not following operating instructions in the User's Guide are not covered by the warranty.
- 13- The maximum working pressure of kalde ball gas valves (MOP 0,5) is 0,5 bars. The minimum operating temperature is -20 °C, and the maximum operating temperature is 60 °C. Do not use the valves at higher pressures and outside of this temperature range.
- 14- In installation applications: existing local installation regulations and codes of practice should be observed and be taken into consideration.
- 15- Use teflon for sealing when assembling threaded parts and do not overload to screw it. If linen is used as sealing material; care should be taken not to over wrap, In case of excessive use, other brass parts may cause fatigue cracking or breakage over time and separation of plastic and metal from each other.
- 16- Before installation, the products to be used must be visually checked, if there are cracks, broken etc. defects should be returned to our company for replacement without using the product.
- 17- After the installation is finished, the products in the system should be tested for leakage. If there are leaking products should be returned to our company to be replaced with a new one.

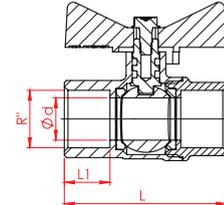
Note: After the installation process is completed, check the connections for leaks with soap bubbles. Do not use the valve if it is leaking. Use Filter fittings the installation for valve security.

Note: Products that have not been checked and tested before and after installation are excluded from the warranty. Any damages arising from this reason are the responsibility of the implementing company.

Gas Systems

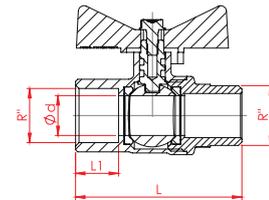
Metallic Ball Valve Female Butterfly Handle

Code	Size	d	R"	L1	L	Pcs.
3391-lgv-0b0002	1/2"	14	1/2"	17	58	80
3391-lgv-0c0002	3/4"	19	3/4"	19	67	50
3391-lgv-100002	1"	24	1"	22	79,8	30
3391-lgv-1a0002	1 1/4"	30	1 1/4"	24,5	92	15



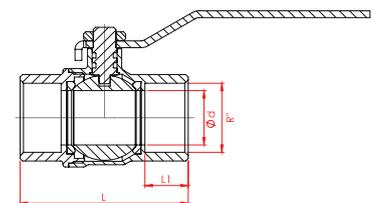
Metallic Ball Valve Male Butterfly Handle

Code	Size	d	R"	L1	L	Pcs.
3391-lgm-0b0002	1/2"	14	1/2"	17	60	80
3391-lgm-0c0002	3/4"	19	3/4"	19	67	50
3391-lgm-100002	1"	24	1"	22	78,8	30
3391-lgm-1a0002	1 1/4"	30	1 1/4"	24,5	90	15



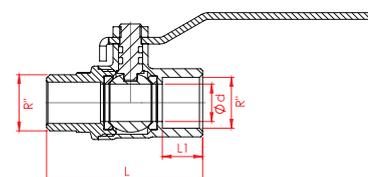
Metallic Ball Valve Female

Code	Size	d	R"	L1	L	Pcs.
3391-lgv-0b0000	1/2"	14	1/2"	17	58	50
3391-lgv-0c0000	3/4"	19	3/4"	19	67	40
3391-lgv-100000	1"	24	1"	22	79,8	20
3391-lgv-1a0000	1 1/4"	30	1 1/4"	24,5	92	15
3391-lgv-1b0000	1 1/2"	40	1 1/2"	24,5	104,3	10
3391-lgv-200000	2"	50	2"	29	124,3	5



Metallic Ball Valve Male

Code	Size	d	R"	L1	L	Pcs.
3391-lgm-0b0000	1/2"	14	1/2"	17	60	50
3391-lgm-0c0000	3/4"	19	3/4"	19	67	40
3391-lgm-100000	1"	24	1"	22	78,8	20
3391-lgm-1a0000	1 1/4"	30	1 1/4"	24,5	90	15
3391-lgm-1b0000	1 1/2"	40	1 1/2"	24,5	106	10
3391-lgm-200000	2"	50	2"	29	122	5





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