

Technical Manual

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# **komet** | *850 Valve*

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Differential Pressure Operation  
Solenoid Operation



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**THE KOMET ADVANTAGE:**  
INNOVATION WITH IMPACT

# Komet 850 - 2" Control Valve for Differential Pressure Operation

In order to achieve the best performance and trouble free operation of the Komet 850 End-Gun control valve, carefully follow the installation instructions below.

**WARNING** Follow this installation instructions and all safety instructions of the center-pivot manufacturer's installation instructions. Non observation of the center-pivot manufacturer's warnings could result in serious injury or death. Only certified personnel are allowed to install the Komet 850 valve.

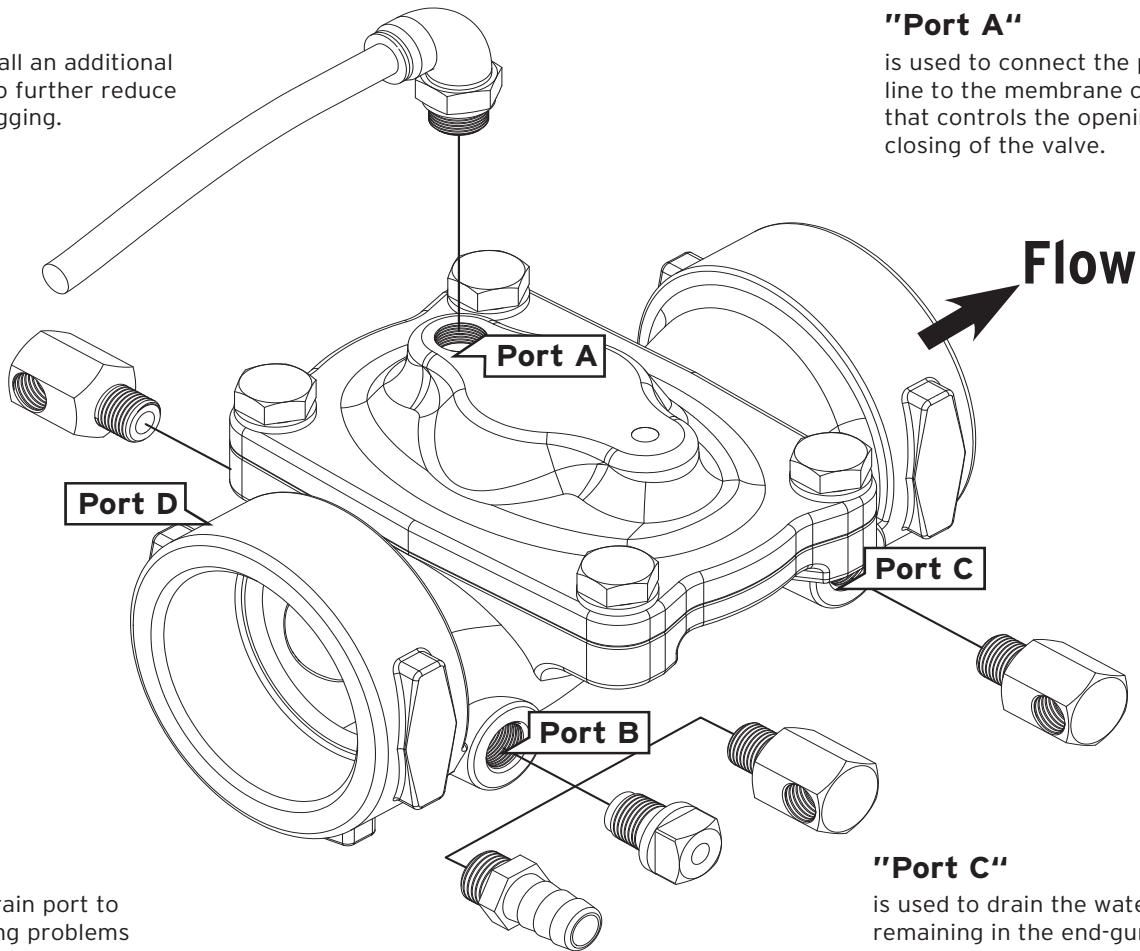
## Ports used on the Komet 850 Valve

### "Port D"

is used to install an additional drain device to further reduce the risk of clogging.

### "Port A"

is used to connect the pressure line to the membrane chamber that controls the opening and closing of the valve.



### "Port B"

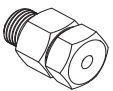
is used as a drain port to prevent priming problems of the booster pump due to air-locking.

### "Port C"

is used to drain the water remaining in the end-gun at shutdown of the system to prevent damage due to freezing.

## Available drain devices

### Automatic Drain Valve



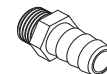
Is used to automatically vent air while the system is turned on and to drain water when the system is shutdown.

### Standard Drain Plug



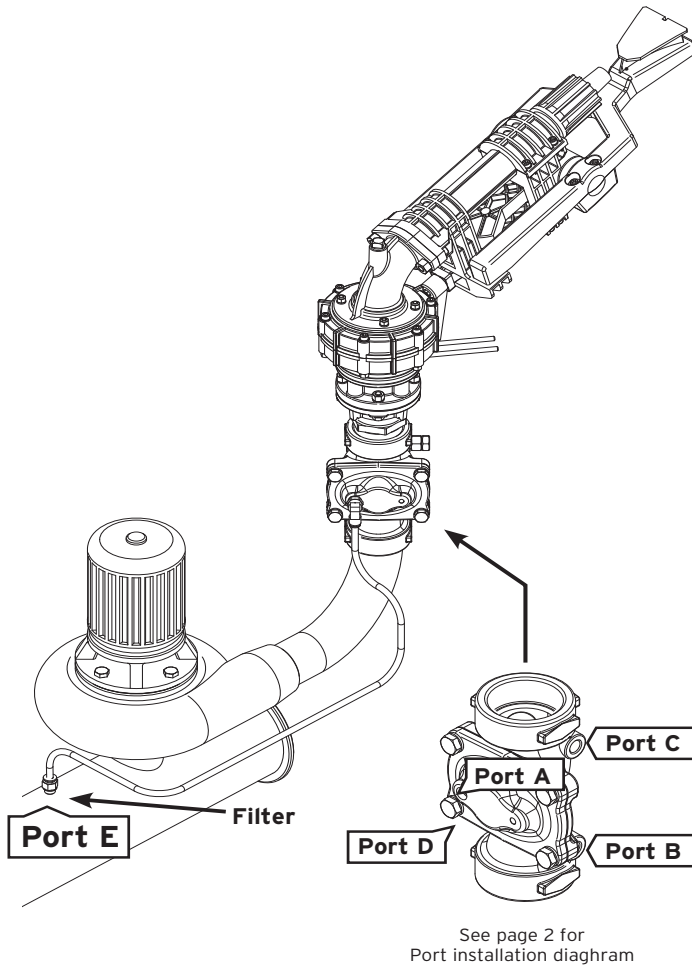
Produces a continuous water stream during the operation of the system and is used where potential clogging may be an issue.  
Approx. discharge:  
3.8 gpm @ 30 psi / 0,24 l/s @ 2 bar

### 1/4" Hose Barb Adapter



Produces a continuous water stream during the operation of the system and is used where clogging is a problem throughout the system.  
Approx. discharge:  
15.3 gpm @ 30 psi / 0,97 l/s @ 2 bar

## Installing the Komet 850 - 2" Valve for operation with "Differential Pressure"



1. Install the Komet 850 valve as specified by the pivot manufacturer. Apply sealant and/or anti-seize material to the threads, then tighten the threads.  
**Important:** direct "Port B" and/or "Port D" away from the center-pivot or any electrical components.
2. Connect "Port A" on the valve's membrane chamber, up-stream of the booster pump to the top side of the pivot pipe to "Port E". The water must be filtered. The pivot pressure will keep the valve closed. Only when the booster pump is turned on and a minimum of 10 PSI of pressure is added, will the valve open. The water is forced out of the membrane chamber back into the pivot line.
3. In "Port B" make sure a drain device is installed. The drain device is essential to allow air-venting from the booster pump at the start-up of the pivot. This is the most efficient method to avoid air-locking of the valve in order to keep the booster pump primed at all times. The optional drain devices are as follows:
  - automatic drain valve: vents the air and drains water
  - standard drain plug: produces a continuous spray and is used where clogging situations may occur.
  - 1/4" hose barb adapter: produces a continuous spray and is used where the standard drain plug clogs due to water with a high content of solids.
4. In "Port C" if necessary, install a drain device to prevent damage to the end-gun and the valve in freezing conditions.
5. In "Port D" an additional drain device can be installed to increase the clogging resistance to ensure reliable operation of the valve.

## Trouble Shooting

The valve design is very simplistic and reliable. If the valve is not opening or closing properly, the problem is almost always found within the connections, mostly plugging of the filter or pressure line to the valve or plugging of the drain device.

<p><b>VALVE DOES NOT OPEN:</b></p>	<p>1. Depending on the drain device used, check the following:</p> <p><b>Automatic drain valve:</b> remove the automatic drain valve from the Komet 850 valve and check its operation.</p> <p><b>Standard drain plug or 1/4" hose barb adapter:</b> while the center-pivot system is running, visually check that the standard drain plug or the 1/4" hose barb adapter mounted in "Port B" and/or "Port D" of the valve is spraying out water. If not, clean the drain devices. A plugged drain device can be the cause of air-locking of the valve, which prevents the booster pump from proper priming and therefore the end-gun from operating.</p>
<p><b>VALVE DOES NOT CLOSE:</b></p>	<p>1. Check that the strainer filter mounted on "port E", which is located on the up-stream side of the booster pump, is not clogged. If clogged, clean it.</p> <p>2. Check that the tubing to the membrane chamber is not plugged or kinked. Clean / replace it.</p> <p>3. Check the membrane chamber for debris or damage to the membrane by removing the valve's cover. Clean or replace the membrane.</p>

## Komet 850 - 2" Control Valve for Solenoid Operation

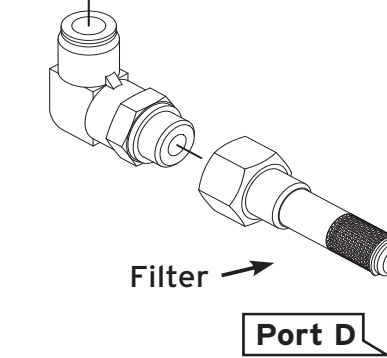
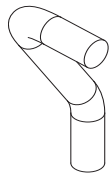
In order to achieve the best performance and trouble free operation of the Komet 850 End-Gun control valve, carefully follow the installation instructions below.

**⚠ WARNING** Follow this installation instructions and all safety instructions of the center-pivot manufacturer's installation instructions. Non observation of the center-pivot manufacturer's warnings could result in serious injury or death. Only certified personnel are allowed to install the Komet 850 valve.

### Ports used on the Komet 850 Valve

#### "Port D"

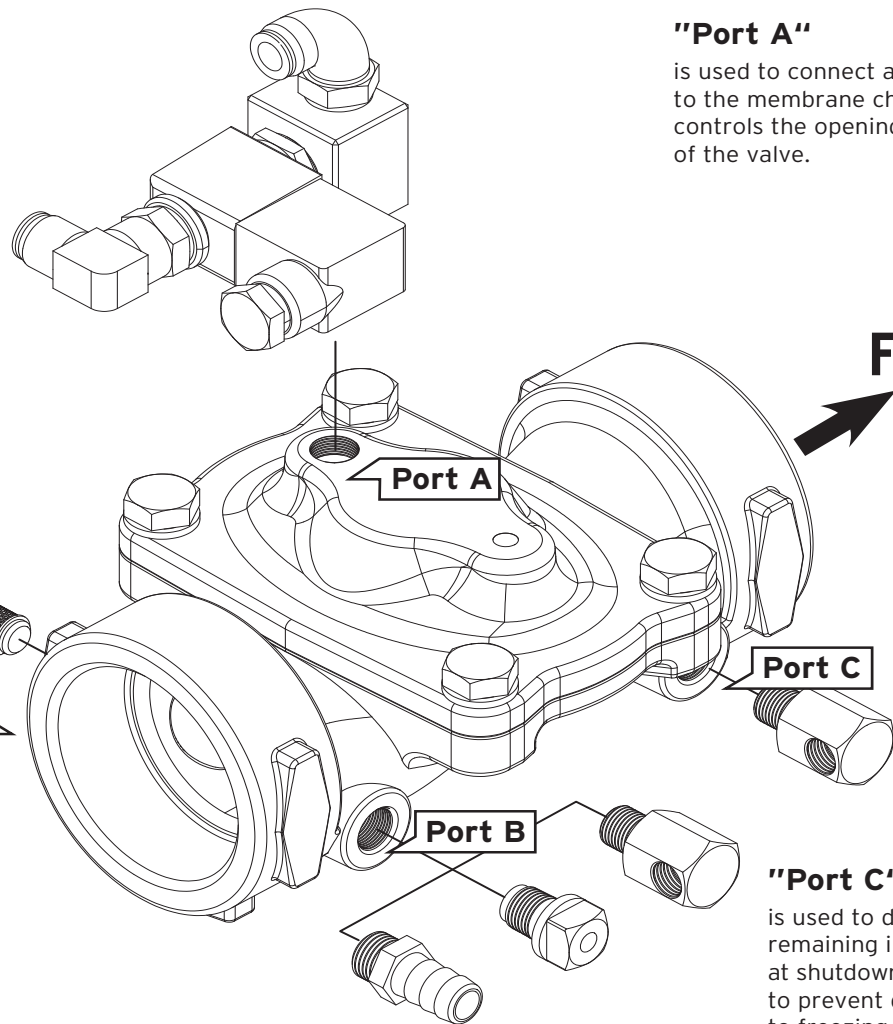
is used as a pressure port for the solenoid valve.



Filter →  
**Port D**

#### "Port B"

is used as a drain port to prevent priming problems of the booster pump due to air-locking.



#### "Port A"

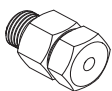
is used to connect a solenoid to the membrane chamber that controls the opening and closing of the valve.

#### "Port C"

is used to drain the water remaining in the end-gun at shutdown of the system to prevent damage due to freezing.

### Available drain devices

#### Automatic Drain Valve



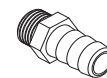
Is used to automatically vent air while the system is turned on and to drain water when the system is shutdown.

#### Standard Drain Plug



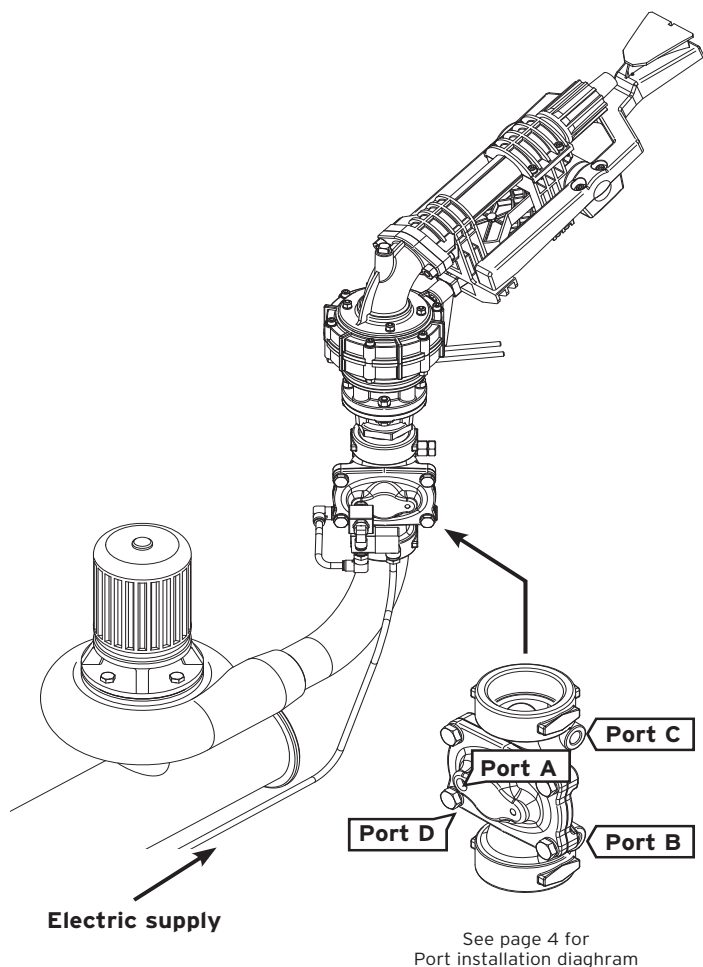
Produces a continuous water stream during the operation of the system and is used where potential clogging may be an issue.  
Approx. discharge:  
3.8 gpm @ 30 psi / 0,24 l/s @ 2 bar

#### 1/4" Hose Barb Adapter



Produces a continuous water stream during the operation of the system and is used where clogging is a problem throughout the system.  
Approx. discharge:  
15.3 gpm @ 30 psi / 0,97 l/s @ 2 bar

## Installing the Komet 850 - 2" Valve for operation with a "Solenoid Valve"

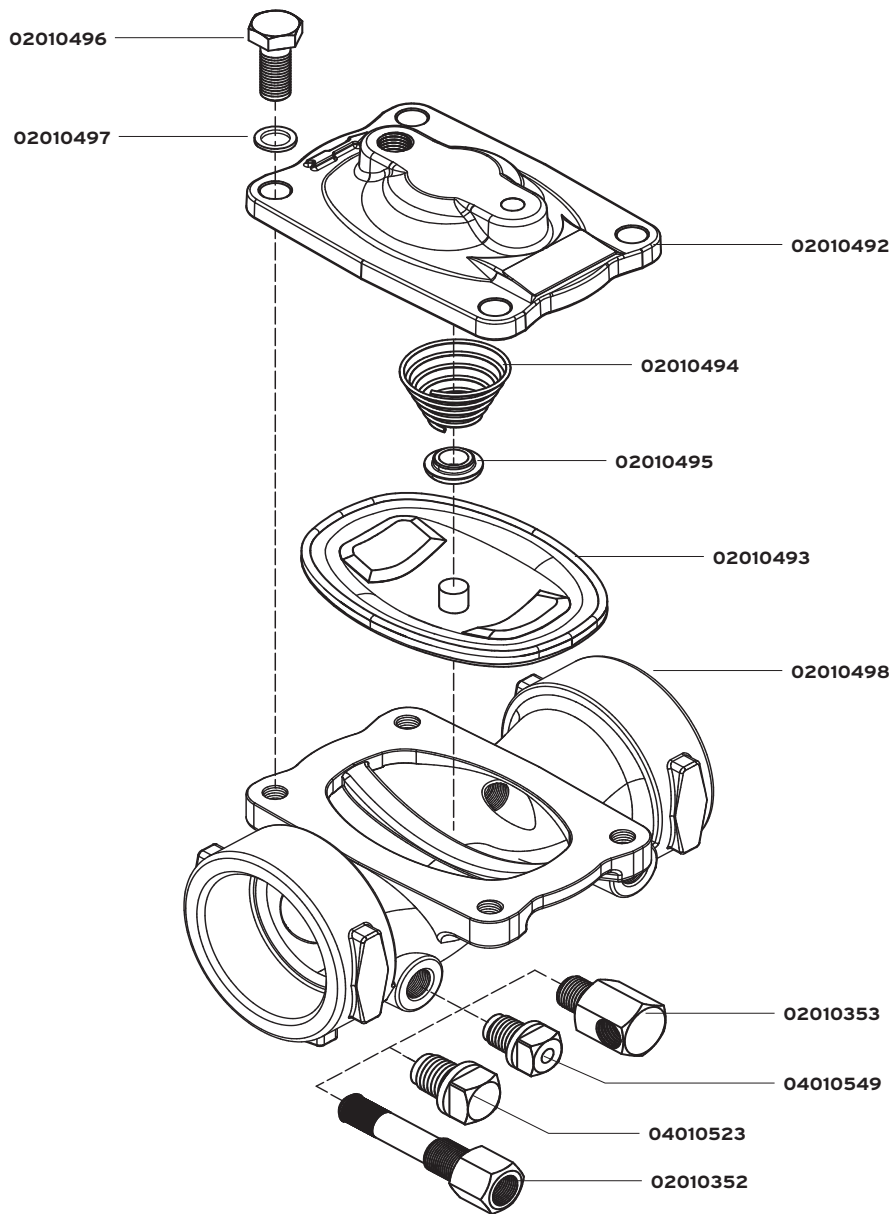


1. Install the Komet 850 valve as specified by the pivot manufacturer. Apply sealant and/or anti-seize material to the threads, then tighten the threads.  
**Important:** direct "Port B" away from the center-pivot or any electrical components.
2. In "Port A" on the valve's membrane chamber, mount the solenoid valve or connect the line from the solenoid if it is mounted further away.
3. In "Port B" make sure a drain device is installed. The drain device is essential to allow air-venting from the booster pump at the start-up of the pivot. This is the most efficient method to avoid air-locking of the valve in order to keep the booster pump primed at all times.  
The optional drain devices are as follows:
  - automatic drain valve: vents the air and drains water
  - standard drain plug: produces a continuous spray and is used where clogging situations may occur.
  - 1/4" hose barb adapter: produces a continuous spray and is used where the standard drain plug clogs due to water with a high content of solids.
4. In "Port C" if necessary, install a drain device to prevent damage to the end-gun and the valve in freezing conditions.
5. In "Port D" connect the pressure line to the solenoid valve. A strainer filter is mandatory to prevent the solenoid from clogging. In case the solenoid is mounted further away, take the pivot pressure at a convenient place, best place is on top of the pivot pipe.

## Trouble Shooting

The valve design is very simplistic and reliable. If the valve is not opening or closing properly, the problem is almost always found within the connections, mostly plugging of the filter or pressure line to the valve or plugging of the drain device.

<p><b>VALVE DOES NOT OPEN:</b></p>	<ol style="list-style-type: none"> <li>1. Check the solenoid valve, the strainer filter and the hose from the filter to the solenoid valve for clogging or electrical fault.</li> <li>2. Depending on the drain device used, check the following:  <b>Automatic drain valve:</b>                      remove the automatic drain valve from the Komet 850 valve and check its operation.  <b>Standard drain plug or 1/4" hose barb adapter:</b>                      while the center-pivot system is running, visually check that the standard drain plug or the 1/4" hose barb adapter mounted in "Port B" and/or "Port D" of the valve is spraying out water. If not, clean the drain devices. A plugged drain device can be the cause of air-locking of the valve, which prevents the booster pump from proper priming and therefore the end-gun from operating.</li> </ol>
<p><b>VALVE DOES NOT CLOSE:</b></p>	<ol style="list-style-type: none"> <li>1. Check the solenoid valve for clogging or electrical fault. Clean or replace it.</li> <li>2. Check that the strainer filter is not clogged. If clogged, clean it.</li> <li>3. Check that the tubing to the solenoid valve and eventually the tubing from the solenoid valve to "Port A" is not plugged or kinked. Clean or replace it.</li> <li>4. Check the membrane chamber for debris or damage to the membrane by removing the valve's cover. Clean or replace the membrane.</li> </ol>



ENGLISH Description	DEUTSCH Bezeichnung	ITALIANO Denominazione	FRANCAIS Désignation	Q.ty Stk. Q.tà Q.té	Part Number Artikel-Nummer Codice Articolo Référence Pièce	
					New Neue Nuovo Nouveau	Old Aite Vecchio Vieux
Automatic drain valve	Automat. Entleerungsventil	Valvola di spurgo automatica	Vanne vidange automatique	1	02010353	850-2500
Standard drain plug	Entleerungspfropfen	Tappo spurgo	Bouchon de vidange	1	04010549	850-2505
Plug	Pfropfen	Tappo	Bouchon	1	04010523	850-2507
Strainer filter	Filter für Wasserabnahme	Filtro presa d'acqua	Filtre prise d'eau	1	02010352	850-2510
Body valve 850 2"NPT	Körper Ventil 850 2"NPT	Corpo valvola 850 2"NPT	Corps vanne 850 2"NPT	1	02010498	850-3000
Cover valve 850 2"	Deckel Ventil 850 2"	Coperchio valvola 850 2"	Couvercle vanne 850 2"	1	02010492	850-3040
Diaphragm valve 850 2"	Membrane Ventil 850 2"	Diaframma valvola 850 2"	Diaphragme vanne 850 2"	1	02010493	850-3050
Spring valve 850 2"	Feder Ventil 850 2"	Molla valvola 850 2"	Ressort vanne 850 2"	1	02010494	850-3060
Spring seat valve 850 2"	Federsitz Ventil 850 2"	Sede molla valvola 850 2"	Logement ressort vanne 850 2"	1	02010495	850-3070
Bolt valve 850 2"	Schraube Ventil 850 2"	Vite valvola 850 2"	Vis vanne 850 2"	4	02010496	850-3080
Washer valve 850 2"	Scheibe Ventil 850 2"	Rondella valvola 850 2"	Rondelle vanne 850 2"	4	02010497	850-3090





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