

SEALS AND COUPLING MATERIALS USING TABLE

NBR (Nitrile)	FPM (Viton)	EPDM	PTFE (Teflon)
<p>Main properties: Resistant to oil and petrol good ageing characteristics, high abrasion resistance.</p> <p>Als Dichtungswerkstoffe stehen folgende Serlenqualitäten zur Verfügung: Perbunan, Haupteigenschaften : Beständigkeit gegen Öl und Benzin gute Alterungsbeständigkeit, hoher Schutz gegen Abrieb.</p>	<p>Main properties: Outstanding heat resistant performance, excellent resistance to oils, chemicals, solvent, active oxygen, and weather.</p> <p>Viton, Haupteigenschaften: Übertroffene Hitzebeständigkeit, ausgezeichnete Beständigkeit gegen Öle, Chemikalien, Lösungsmittel, Ozon, Sauerstoff und Witterung.</p>	<p>Main properties Ethylen Propylene, High mechanical strength, excellent resistance to high and low temperatures and to active oxygen and weather. Good resistance to chemical media.</p> <p>EP, Athylen Propylen, Haupteigenschaften: Hohe mechanische Festigkeit. Ausgezeichnete Wärme- und Kältebeständigkeit. Hervorragende Beständigkeit gegen Ozon- und Witterungseinflüsse. Gute chemische Beständigkeit.</p>	<p>For very aggressive media special constructions with PTFE seals (Teflon) are available. Für sehr aggressive Medien sind Sonderkonstruktionen mit PTFE-Dichtungen (Teflon) verfügbar. Alle Angaben sind unverbindlich und dienen nur zur Orientierung. Sie gelten 1. für reine Stoffe, 2. wenn nicht anders angegeben für Flaumtemperatur. 3. bei Säuren, Säuren usw., für wässrige Lösungen mäßiger Konzentrationen. Teflon-eingetragenes 'Dupont'-Warenzeichen.</p>

Symbols - Korrosionstabelle	Material						Seal Dichtung		
	Steel zinc plated Stahl Verzinkt	Brass - Messing	AISI 316 Ti or similar Edelstahl/AISI 316 Ti	Polyamide 11/12 Polyamid 11/12	Polyacetal - Poliasetal	NBR Nitrile	FPM Viton	EPDM	
✓ Fully resistant / beständig D Partly resistant / bedingt — Non-resistant / nicht									
Acetate (Ethyl Acetate & Amyl Acetate)	✓	✓	✓	✓	✓			X	
Acetic acid 10%		—	✓	—	✓			X	
Acetone	✓	✓	✓	✓	✓			X	
Acetylene	✓	✓	✓	✓	✓	X	X	X	
Aero Engine Fuel BP, Esso Avgas100/130	✓	✓	✓	✓	D	X	X		
Aero Engine Oil BP : AIRO 1210, Esso: AVIATON-120 Shell: AIRO-120, DERD 2487 DERD 2497, DTD 585	✓	✓	✓	✓	D	X	X		
Skydrol	✓	—	✓	—	—			X	
Oronite	✓	—	✓	—	—		X		
Air, compressed	✓	✓	✓	✓	✓	X	X		
Air, hot up to 120°C	✓	✓	✓	D	—		X	X	
Air, hot up to 200°C	✓	✓	✓	—	—		X		
Alcohol	✓	✓	✓	✓	✓		X		
Alum		—	✓	—	✓	X	X	X	
Alkalies	—	D	✓	✓	D	X		X	
Ammonia, Liquid	D	—	✓	✓	—			X	
Ammonium Sulphate Solution	—	—	✓	✓	D	X	X	X	
Amyl Alcohol	✓	✓	✓	✓	✓		X		
Aniline	✓	—	✓	D	—		X		
Benzole	✓	✓	✓	✓	✓		X		
Borax	✓	✓	✓	—	—		X	X	
Bultane	✓	✓	✓	✓	✓	X	X		
Bultane	✓	—	✓	—	—	X	X		
Butyl Alcohol	—	✓	✓	✓	✓			X	
Carbon Dioxide	—	✓	✓	✓	✓	X	X	X	
Carbon Dioxide, dry		✓	✓	✓	—	X	X	X	
Carbon Dioxide liquid	—	✓	✓	✓	D	X	X	X	
Carbon Bisulphide	✓	—	✓	—	—		X		
Chloride of Barium		✓	D	✓	✓	X	X	X	
Chromic Acid	—	—	D	D	—		X		
Citric Acid	—	D	✓	—	D		X	X	
Creosote	✓	—	✓	—	—		X		
Cresol	D	✓	✓	—	—		X		
Cresol, Cresylic Acid	✓	—	✓	—	—		X		
Cupric Chloride	✓	—	D	—	—	X	X	X	
Cyclohexane	✓	—	✓	D	✓		X		
Dimethylamine	✓	—	✓	—	—		X		
Emulsion. (Water/Oil)	D	✓	✓	✓	✓	X	X		
Ether	✓	✓	✓	✓	✓		X		

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✓ Fully resistant / beständig D Partly resistant / bedingt — Non-resistant / nicht									
Ethyl Alcohol	✓	✓	✓	✓	✓	X		X	
Ethylene	✓	✓	✓	✓	✓		X		
Formalin	✓	✓	✓	—	D	X	X	X	
Formic Acid	—	D	✓	—	—			X	
Frigen	✓	✓	✓	✓	✓	X	X		
Gasoline, Refined	✓	—	✓	—	—	X	X		
Gas, Blast Furnace	D	✓	✓	—	D		X		
Gas, Coal	D	✓	✓	✓	✓		X		
Gas, Coke Oven	D	✓	✓	D	D	X			
Gas, Lighting	✓	✓	✓	✓	✓	X	X		
Gas, Naphtalene content	✓	✓	✓	✓	D	X	X		
Gas, Natural	✓	✓	✓	✓	✓	X	X		
Gas, Town	✓	✓	✓	✓	✓	X			
Gear Oil	✓	—	✓	—	—	X	X		
Glucose		✓	✓	✓	✓	X	X	X	
Glycerine	✓	✓	✓	✓	✓	X	X	X	
Glycol	✓	✓	✓	✓	✓	X		X	
Helium	✓	✓	✓	✓	✓	X	X	X	
Hexane	✓	—	✓	✓	D	X	X		
Hydrocarbons	✓	✓	✓	✓	✓	X	X		
Hydrogen	✓	✓	✓	✓	D	X	X		
Hydrogen Gas	✓	—	✓	—	—	X	X		
Hydrogen Sulphide, Humid		D	✓	✓	—			X	
Hydrogen Sulphide, dry		✓	✓	—	✓			X	
Hydrogen Peroxide 30%	—	—	✓	✓	—		X		
Isopropyl Alcohol	✓	—	✓	D	✓	X	X	X	
Kerosene, JP 1	✓	✓	✓	✓	✓	X	X		
Keton, Methyl Ethyl	✓	✓	✓	✓	✓			X	
Latex, liquid up to 130°C	✓	✓	✓	D	D	X			
Lubricating Oil	✓	✓	✓	✓	✓	X	X		
Lye, Caustic	—	✓	✓	—	D			X	
Lye, Hyochorous Acid	—	—	✓	—	D				
Lye, Pickling	—	MS60	✓	D	D		X		
Magnesium Carbonate	✓	—	✓	✓	✓	X	X	X	
Magnesium Hydroxide	✓	✓	✓	✓	✓	X	X	X	
Magnesium Sulphate. M.Sulfat		—	✓	✓	✓	X	X	X	
Mercury	✓	—	✓	✓	✓	X	X	X	
Methane	✓	✓	✓	✓	✓	X	X		
Methanol	✓	✓	✓	✓	✓	X		X	
Methyl Alcohol	✓	✓	✓	D	✓	X		X	
Methyl Ethyl Ketone	✓	—	✓	✓	✓			X	

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<p>✓ Fully resistant / beständig D Partly resistant / bedingt — Non-resistant / nicht</p>	Steel zinc plated Stahl Verzinkt	Brass - Messing	AISI 316 Ti or similar Edelstahl/AISI 316 Ti	Polyamide 11/12 Polyamid 11/12	Polyacetal - Poliasetal	NBR Nitrile	FPM Viton	EPDM
	Methyl Benzene	✓	—	✓	✓	✓	X	X
Milk	✓	—	✓	✓	✓	X	X	X
Napta	✓	—	✓	✓	✓	X	X	
Naptalene	✓	✓	✓	✓	✓	X	X	
Naptenic. Acid	✓	—	✓	—	—	X	X	
Nitrate of Ammonium	✓	—	✓	—	—	X	X	X
Nitric Acid. up to 35°C	—	✓	✓	—	—	X	X	X
Nitrogen	✓	✓	✓	✓	✓	X	X	X
Nitro-Solution (no synthetic resin thinners)	✓	✓	✓	—	✓			X
Oil, Coal Tr	✓	—	✓	✓	D	X	X	
Oil, Crude	✓	✓	✓	✓	✓	X	X	
Oil, Diesel	✓	✓	✓	✓	✓	X	X	
Oil, Diesel up to 120°C	—	✓	✓	D	—	X	X	
Oil, Fuel up to 100°C	✓	✓	✓	D	—	X	X	
Oil, up to 200°C/ 300°C up to (special type)	✓	D	✓	—	—	FFKM	FFKM	FFKM
Oil, Fuel 5x5	✓	✓	✓	D	✓	X	X	
Oil, Hydraulic Chlorinated	D	D	✓	—	D	X	X	
Oil, Hydraulic up to 120°C	✓	✓	✓	D	D	X	X	
Oil, Linseed	✓	✓	✓	✓	✓	X	X	
Oil, Mineral	D	✓	✓	✓	✓	X	X	
Oil, Transformer	D	D	✓	✓	D	X	X	
Oleic Acid	✓	—	✓	✓	✓	X	X	
Oxalic Acid	D	D	✓	✓	✓	X	X	
Oxygen. fat free	—	✓	✓	✓	D			X
Paraffin	✓	✓	✓	✓	✓	X	X	
Paraffin, (Wax)	✓	✓	✓	✓	✓	X	X	
Pentachlorophenole	✓	—	—	—	—	X	X	
Petrol Ether	—	✓	✓	✓	✓	X	X	
Petrol	✓	✓	✓	✓	✓	X	X	
Phenol Solution	D	✓	✓	—	—			
Phosphoric Acid 10%	—	—	✓	—	—	X	X	
Potassium Cyanide	✓	—	✓	✓	D	X	X	
Potassium Dichromate	✓	—	✓	—	D	X	X	
Potassium Sulphate	✓	—	✓	—	—	X	X	X
Potassium Hydroxide	✓	—	✓	✓	D			X
Propane	✓	✓	✓	✓	✓	X	X	
Prussic Acid	✓	—	✓	—	—	X	X	
Salt Solution	—	D	D	✓	D	X	X	
Sea Water	—	—	D	—	✓	X	X	X

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	Soap Solution	—	✓	✓	✓	✓	X	X
Soap Solution	—	D	✓	✓	✓	D	X	X
Sodium Acetate	—	—	✓	✓	✓	X	X	X
Sodium Bicarbonate	—	—	D	✓	✓		X	X
Sodium Carbonate	✓	—	✓	✓	✓	X	X	X
Sodium Chloride	✓	—	✓	✓	✓	X	X	X
Sodium Cyanide	✓	—	✓	—	D			X
Sodium Sulphide	✓	D	✓	—	—		X	X
Steam, up to 150°C	D	D	✓	—	—			X
Steam, up to 250°C	D	D	✓	—	—			PTFE
Sulphide of barium	✓	D	✓	✓	—	X	X	X
Sulphur Dioxide, Gas	—	✓	✓	—	—			X
Sulphuret of Carbon	—	✓	✓	—	✓	X	X	
Synthetic Resin Thinners (no nitrosolution)	✓	✓	✓	D	D	X	X	
Tar	✓	✓	✓	✓	✓	X	X	
Tetrachloride of Titanium	✓	—	✓	—	—	X	X	
Toluol, dry	D	✓	✓	✓	✓	X	X	
Trichlorethylene	✓	D	✓	✓	—	X	X	
Turbine Fuel, BP: ATK 2494, ES-SO:MIL-F56/16, SHELL:ATF 650	✓	✓	✓	✓	D	X	X	
Turbine Oil, Esso:35	✓	✓	✓	✓	D	X	X	
Turb-oil 1 S (MILL 7808)	D	D	✓	✓	D	X	X	
Vacuum (Strengthened Valve Springs)	✓	✓	✓	✓	✓			
Vegetable Oil	✓	—	✓	✓	✓	X	X	X
Water, Distilled	—	—	✓	✓	✓	X	X	
Water, Deionized	—	—	✓	—	—	X	X	
Water, Demineralised	—	—	✓	—	—	X	X	
Water, up to 80°C	D	✓	✓	D	D	X	X	X
Water, over 80°C	D	✓	✓	D	—	X	X	
Water, Cooling	D	D	✓	✓	D	X	X	
Xylene	✓	✓	✓	✓	✓	X	X	





Temperature Range - Temperaturbereich

Nitrile (N)	-20°C + 110°C (-4°F + 230°F)
FPM (V)	-20°C + 180°C (-4°F + 356°F)
EPDM (Ethylene Propylene)	-40°C + 150°C (-40°F + 302°F)

Working Pressure - Betriebsdruck

25 Bar (360 PSI)

Connction/Disconnection Pressure -

15 Bar (220 PSI)

Material of steel version / Material für die Stahl Version

Socket Body - Kupplungsgrundkörper	Steel tenifer threaded Stahl teneferiert
Back Part - Hinterteil	Steel zinc-nickel plated Stahl Zink-Nickel beschichtet
Sleeve - Hülse	Steel zinc-nickel plated and orange painted Stahl Zink-Nickel beschichtet und orange Lackiert
Springs - Federn	Stainless steel - Edelstahl
Seals - Dichtungen	Nitrile (N)

Plug - Nippel	Steel tenifer threaded Stahl teneferiert
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451 The sleeve orange colour plastic
Hülse ist aus Kunststoff, farbe orange

Material of stainless steel version Material für die Edelstahlversion

Socket Body - Kupplungsgrundkörper	Stainless steel Edelstahl
Back Part - Hinterteil	Stainless steel - Edelstahl
Sleeve - Hülse	Stainless steel - Edelstahl
Springs - Federn	Stainless steel - Edelstahl
Seals - Dichtungen	FPM (V)

Plug - Nippel	Stainless steel - Edelstahl
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Advantages

- The system perfectly fits to the **ISO 4414**, **EN 983** safety requirements.
- Plug profile perfectly fits to the **ISO 6150-C** & **AFNOR-C**
- 2 stage disconnection safety feature
- Negligible Connecting Force
- Smart and Ergonomic features
- Ease of Handling
- Optimised Size

Vorteil

- Sicherheit gemäß **ISO 4414**, **EN 983**
- Stecknippel gemäß **ISO 6150-C** & **AFNOR-C**
- 2 stufen Sicherheitsentriegelung
- Einfache Bedienung, sehr geringe Kuppelkraft
- Kompakte Bauform

Working Principle

- Connection

Push plug into coupling until it is heard to engage by a click by one-hand.

- Disconnection

The plug is disconnected by turning the release ring to left. It is held back by the safety catch, until the air hose is ventilated. The plug can only be released by turning the release ring to the right.

Arbeitsprinzip

- Einkuppeln

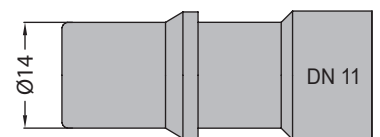
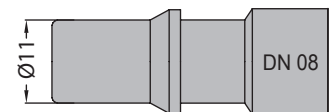
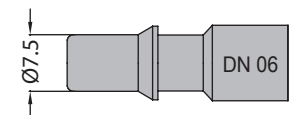
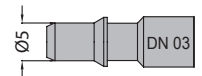
Nippel in die Kupplung eindrücken bis der Nippel hörbar einrastet - auch mit einer Hand möglich.

- Entkuppeln

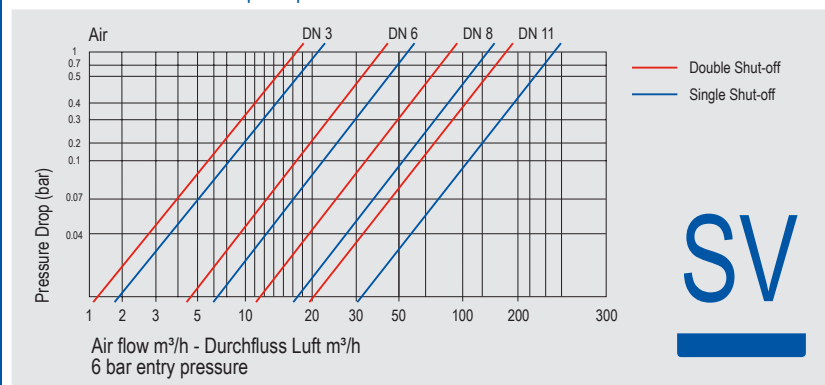
Durch eine Linksdrehung der Drehhülse wird der Nippel ausgekuppelt, jedoch von der Sicherheitsklinke erst freigegeben wenn der Druckluftschlauch entlüftet ist. Erst nach Rechtsdrehung der Drehhülse wird der Stecknippel freigegeben.

Flow size - Nennweiten

450.03 / SV 1-Stage	3mm (1/8")
450.06 / SV 2-Stage	5.5mm (1/4")
450.08 / SV 2-Stage	8mm (3/8")
450.11 / SV 2-Stage	11mm (1/2")
451.06 / SV 2-Stage	5.5mm (1/4")
451.08 / SV 2-Stage	8mm (3/8")
452.06 / SV Coded	5.5mm (1/4")



Flow Rate vs Pressure Drop Graph



Compatible - Kompatibilität

170.06
171.06
173.06
450.06
461.06 / SC-K

Temperature Range - Temperaturbereich

Nitrile (N) -20°C + 110°C (-4°F + 230°F)
FPM (V) -20°C + 180°C (-4°F + 356°F)
EPDM (Ethylene Propylene) -40°C + 150°C (-40°F + 302°F)

Working Pressure - Betriebsdruck

25 Bar (360 PSI)

Connction / Disconnection Max. Pressure -

Ein- und Auskuppelbar bis Max. Druck
15 Bar (220 PSI)

Flow size - Nennweite

451.06 5.5mm (1/4")

Standard version - Standardversion

Seals - Dichtung : Nitrile (N)

Material of standard version with plastic release ring

Material für die Standardversion mit Kunststoffauslösering

Socket Body -	Steel tenifer threaded
Kupplungsgrundkörper	Stahl teneferiert
Back Part -	Steel zinc nickel plated
Hinterteil	Stahl Zink-Nickel beschichtet
Sleeve -	Orange colour plastic
Hülse	Kunststoff, Farbe orange
Springs - Federn	Stainless steel - Edelstahl
Seals - Dichtungen	Nitrile (N)

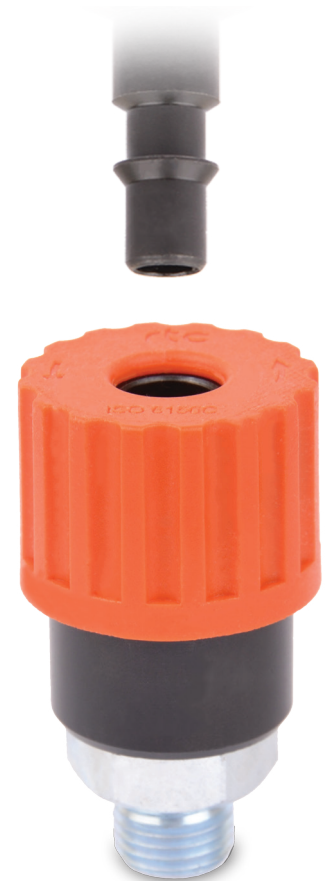
Plug	Steel tenifer threaded
Nippel	Stahl teneferiert

Advantages

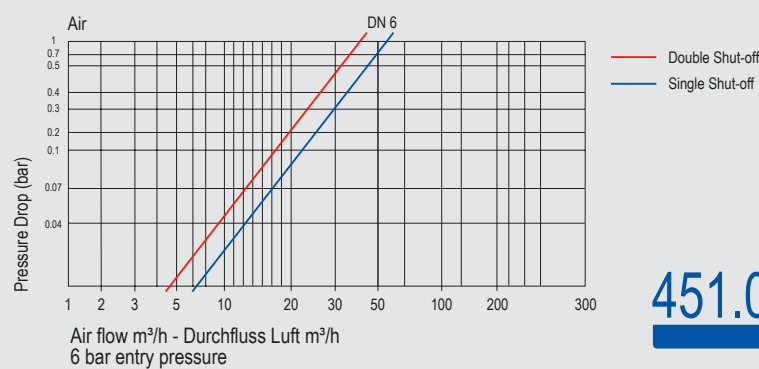
- The system perfectly fits to the **ISO 4414, EN 983** safety requirements.
- Plug profile perfectly fits to the **ISO 6150-C-10, AFNOR C-10 NF E 49-053**
- 2 stage disconnection safety feature
- Through flow, minimum pressure loss
- Negligible Connecting Force
- Smart and Ergonomic features
- Ease of Handling
- Optimised Size

Vorteil

- Sicherheit gemäß **ISO 4414, EN 983**
- Stecknippel gemäß **ISO 6150-C-10, AFNOR C-10 NF E 49-053**
- 2 stufen Sicherheitsentriegelung
- Voller Durchgang, sehr geringer Druckverlust
- Einfache Bedienung, sehr geringe Kuppelkraft
- Kompakte Bauform



Flow Rate vs Pressure Drop Graph



451.06

Plastic sleeve socket with male thread / Kupplung mit Kunststoffdrehhülse und Aussengewinde



Socket / Kupplung	Size / Größe	Alternative Order No Alternative Bestellnr.	Order No / Bestellnr.	Ød	Ød1	L	L1	HEX.
	6	R203 00 186	H102.2435	BSP 1/4	31.5	52.5	42.5	20
	6	R203 00 184	H102.2436	BSP 3/8	31.5	52.5	42.5	20
	6	R203 00 185	H102.2437	BSP 1/2	31.5	54.5	42.5	22
	6	-	H102.2438	NPT 1/4	31.5	54.5	42.5	20
	6	-	H102.2439	NPT 3/8	31.5	54.5	42.5	20

451.06

Plastic sleeve socket with female thread / Kupplung mit Kunststoffdrehhülse und Innengewinde



Socket / Kupplung	Size / Größe	Alternative Order No Alternative Bestellnr.	Order No / Bestellnr.	Ød	Ød1	L	L1	HEX.
	6	R203 00 180	H102.2440	BSP 1/8	31.5	52.5	-	20
	6	R203 00 181	H102.2441	BSP 1/4	31.5	52.5	-	20
	6	R203 00 182	H102.2442	BSP 3/8	31.5	55.5	-	20
	6	R203 00 183	H102.2443	BSP 1/2	31.5	59.5	-	24
	6	-	H102.2444	NPT 1/4	31.5	56.5	-	20
	6	-	H102.2445	NPT 3/8	31.5	56.5	-	20

451.06

Plastic sleeve standard hose socket / Kupplung mit Kunststoffdrehhülse und Schlauchanschluss



Socket / Kupplung	Size / Größe	Alternative Order No Alternative Bestellnr.	Order No / Bestellnr.	Ød	Ød1	L	L1	HEX.
	6	R203 00 190	H102.2446	Ø6 - 1/4	31.5	65.5	-	-
	6	R203 00 187	H102.2447	Ø8 - 5/16	31.5	65.5	-	-
	6	R203 00 188	H102.2448	Ø10 - 3/8	31.5	68.5	-	-
	6	R203 00 189	H102.2449	Ø13 - 1/2	31.5	68.5	-	-

451.06

Male thread plug / Nippel mit Aussengewinde



Plug / Nippel	Size / Größe	Alternative Order No Alternative Bestellnr.	Order No / Bestellnr.	Ød	Ød1	L	L1	HEX.
	6	R255 00 093	H102.3002	BSP 1/8	-	44	36	14
	6	R255 00 091	H102.3003	BSP 1/4	-	47	36	14
	6	R255 00 092	H102.3004	BSP 3/8	-	52	40	19
	6	R255 00 112	H102.3005	NPT 1/4	-	48	45	14
	6	R255 00 117	H102.3006	NPT 3/8	-	53	48	19
	6	R355 00 125	H102.3720	BSP 1/4	-	44	36	14
	6	R355 00 126	H102.3722	BSP 3/8	-	47	36	14
	6	R355 00 127	H102.3724	BSP 1/2	-	52	40	19
	6	R355 00 129	H102.3748	NPT 1/4	-	48	45	14
	6	R355 00 130	H102.3750	NPT 3/8	-	53	48	19

*SS: Stainless Steel / Edelstahl