

NGV REFUELLING CONNECTIONS

REFUELLING

Comprehensive range of NGV 1 compatible products for the refuelling of all kinds of Compressed Natural Gas vehicles in a safe environment

- NGV 1, ISO 14469 Design
- High flow receptacles and nozzles
- Approved construction
- Safe design

for:

- Fleets
- Self-serve
- Heavy and light duty vehicles

STÄUBLI

STÄUBLI NGV REFUELLING CONNECTIONS

HIGH FLOW TYPE 1 NOZZLE *PAGES 4 / 5*

- **GMV 09** for quick refuelling of heavy duty vehicles as well as light duty vehicles from the same dispenser (bus refuelling within 3 minutes*)

TYPE 2-3 NOZZLES *PAGES 6 / 7*

- **CMV 08/2** for time fill (or fast fill)

STAINLESS STEEL NGV 1 PROFILE RECEPTACLES *PAGES 8 / 10*

- **GMV 08/C:** for refuelling of light and heavy duty vehicles
- **GMV 09:** for refuelling of heavy duty vehicles

IN LINE BREAK - AWAY *PAGES 12 / 13*

Safety system between refuelling station and vehicle

- **BRW 02:** for time fill
- **BRW 08:** for fast and time fill

* When using high flow nozzle and receptacle GMV 09 STÄUBLI (1000 litres (260 gallons) at 200 bar (3000 psi)).

STÄUBLI RECOMMENDED INSTALLATIONS

FAST FILL				
 Heavy duty vehicle	 Break-away BRW 08 page 12	 Nozzle GMV 09 page 4	 Receptacle GMV 09 page 8	 Check Valve GMV 09 page 11
	 Break-away BRW 08 page 12	 Nozzle CMV 08/2 page 6	 Receptacle GMV 08/C page 8	 Check Valve GMV 08/C page 11
TIME FILL				
 Heavy duty vehicle	 Break-away BRW 08 page 12	 Nozzle CMV 08/2 page 6	 Receptacle GMV 09 page 8	 Check Valve GMV 09 page 11
	 Break-away BRW 02 page 12	 Nozzle CMV 08/2 page 6	 Receptacle GMV 08/C page 8	 Check Valve GMV 08/C page 11

VEHICLE CHECK VALVE

PAGE 11

- GMV 08/C: for refuelling of light duty vehicles
- GMV 09: for refuelling of heavy duty vehicles

REFUELLING LINES READY TO USE

PAGE 14

AVERAGE FILLING FLOW OF THE NGV RANGE

PAGE 15

STÄUBLI products should be used in compliance with applicable federal, state and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and materials to be handled. You must check the regulations applicable to the country where the product will be in use and make your selection accordingly.

HIGH FLOW TYPE 1 NOZZLE FOR ALL TYPES OF COMPRESSED NGV'S



GMV 09

Blue (200 bar - 3000 psi)
Yellow (250 bar - 3600 psi)

APPLICATIONS

- Self serve applications.
- For quick refuelling of **heavy duty vehicles** as well as **light duty vehicles** from the same dispenser (bus refuelling within 3 minutes*) when using with STÄUBLI high flow NGV 1 Receptacle (GMV 09).

■ NGV 1 and ISO 14469-1 ISO 14469-3 COMPATIBLE

- High flow capability when refuelling with high flow STÄUBLI NGV 1 receptacle
- Comply with the European directive PED 97/23/CE
- Designed to be incorporated in environments according to ATEX 94/9/CE

CE Marking

PED
ATEX

■ STORAGE REQUIREMENT TO PROTECT THE NOZZLE FROM WATER AND DIRT

When not in use, each nozzle must be protected from water and dirt. It is why we propose the nozzle storage rack shown in the opposite page.

BUS REFUELLING
WITHIN 3 MINUTES *



* When using high flow nozzle and receptacle STÄUBLI GMV 09 (1000 litres (260 gallons) at 200 bar (3000 psi)).

FEATURES

Stäubli new high flow design

Complies with NGV 1 standard

Protected operating trigger

Ergonomic design

User friendly operation

Smooth opening of the filling line

Integrated 3-way valve, with auto vent

Venting to recovery storage

Colour coded for service pressure

Mechanical interlock for proper service pressure connection

Safety

BENEFITS

- Fast refuelling: 1000 litres (260 gallons) at 200 bar (3000 psi) under 3 minutes
- Designed to refill high volume tanks (busses, heavy duty trucks)
- Can be used with any type of vehicles (heavy or compact) equipped with a NGV 1 receptacle
- Excellent resistance against shock, contamination or corrosion
- Protected against dust
- Light weight: 1.640kg (3.62 Lbs)
- Easy handling
- Compact
- Convenient low effort operation
- Pressure automatically vented for safe disconnection
- No gas released into the air
- Instant identification: Blue: 200 bar (3000 psi) - Yellow: 250 bar (3600 psi)
- No misconnection
- Safety lock provides convenient operation
- No possible disconnection if the pressure in the venting hose is higher than 1 bar (14.5 psi)

TECHNICAL DATA

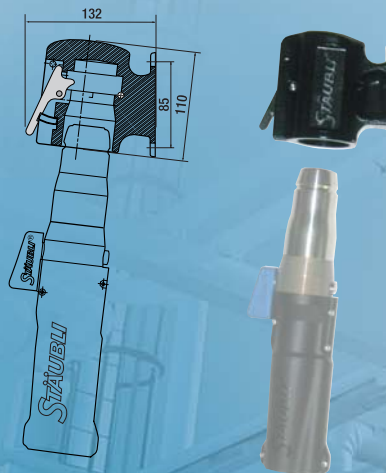
- Internal diameter: 9 mm (3/8").
- Flow area: 63 mm² (0.098 sq. in.).
- Material: stainless steel.
- Pressure range: according to the NGV 1 and ISO 14469-1: 200 bar (3000 psi) ISO 14469-3: 250 bar (3600 psi).
- Flow rate: see page 15.
- Service temperatures: - 40 °C to 85 °C (- 40 °F to 185 °F)

Important:
The gas must be dry and clean.

NOZZLE STORAGE RACK

The nozzle storage rack protects nozzle from water and dirt when not in use.

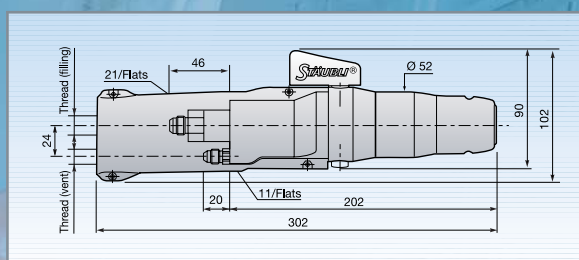
Contact us for other options.



STORAGE RACK PART NUMBER	
BLUE 200 bar (3000 psi) P 30 - B 200 profile	YELLOW 250 bar (3600 psi) P 36 - B 250 profile
N 007 446 00	

For instructions of installation and use, see instruction sheet RV1080100

NOZZLE



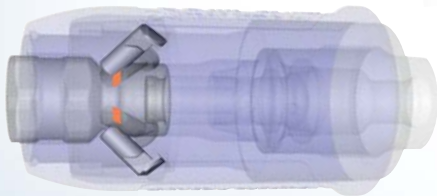
THREADS		NOZZLE PART-NUMBERS	
FILLING	VENT	BLUE 200 bar (3000 psi) P 30 - B 200 profile	YELLOW 250 bar (3600 psi) P 36 - B 250 profile
UN 9/16 - 18 JIC 37°	UN 7/16 - 20 JIC 37°	N 012 100 02	N 012 101 02
UN 3/4 - 16 JIC 37°	UN 7/16 - 20 JIC 37°	N 012 102 02	N 012 103 02

NGV 1 TYPE 2-3 NOZZLES



APPLICATIONS

- Designed for time fill and fast fill, public and private station.
- Specially recommended for fleet applications (refuelling of heavy or light duty vehicles).
- High flow capability.



Revolutionary locking mechanism using independent fingers

- no receptacle deformation due to the large surface area of contact between each finger and the receptacle
- locking safety: audible "click" indicates that the nozzle is properly connected allowing safe vehicle refuelling



■ NGV 1

CMV 08/2

Blue (200 bar - 3000 psi)
Yellow (250 bar - 3600 psi)

PED
ATEX

■ TÜV certified for :

- PED 97/23/CE - C € 0036
- ISO 14469-1
- ISO 14469-3

- Designed to be incorporated in environments according to ATEX 94/9/CE

Pat. pending

Automatic, one-hand operation

Push to connect
Pull to disconnect
Reduced connecting efforts

Safety

Shut-off valve prevents flow of gas when nozzle is disconnected

Increased life system

- reduction of the number of seals:
no seal in the gas flow path
- balanced locking efforts:
no radial stress, no internal deformation,
reduced wear of the locking elements,
- double alignment guiding system

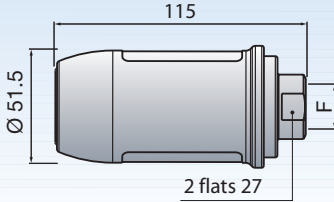
CMV 08/2

TECHNICAL DATA

- Internal diameter:
7.8 mm (5/16")
 - Flow area:
47.8 mm² (0.074 sq. in.)
 - Material: aluminium,
stainless steel and brass
 - Cv = 1.15
 - Pressure range:
according to the NGV 1 and
ISO 14469-1:
200 bar (3000 psi)
ISO 14469-3:
250 bar (3600 psi)
 - Flow rate: see page 15
 - Service temperatures:
- 40 °C to 85 °C
(- 40 °F to 185 °F)
 - Weight : 585 g
- Important:**
The gas must be dry and clean.

PART-NUMBERS

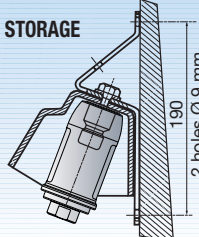
Available from stock in 2 different service pressures

	THREADS	PART-NUMBERS	
		BLUE 200 bar (3000 psi) P 30 - B 200 profile	YELLOW 250 bar (3600 psi) P 36 - B 250 profile
	G 1/4 female thread	N 011 797 07	N 005 869 08
	UN 9/16 - 18 female thread	N 011 759 07	N 005 868 08

For instructions of installation and use, see instruction sheet RV1130100

STORAGE TO PROTECT THE NOZZLE FROM WATER AND DIRT

When not in use, each nozzle must be protected from water and dirt. It is why we propose the nozzle storage rack.
Contact us for other options.

NOZZLE STORAGE RACK*	PART-NUMBERS	
	BLUE 200 bar (3000 psi)	YELLOW 250 bar (3600 psi)
	CMV 08. 9000/30	

* Use CMV 08 storage rack only with CMV 08/2 nozzle

STAINLESS STEEL NGV 1 PROFILE RECEPTACLES



ECE R 110

APPLICATIONS

Receptacle designed to last for the lifetime of the vehicle

QUIET

The internal technology of the plug reduces the intensity of vibrations caused by fluid passage during refuelling.

QUICK

EFFICIENT

Minimal pressure for valve opening.

LONG LIFE EXPECTANCY

Due to its high quality construction, the material used and the machining accuracy.

The STÄUBLI receptacles are leak-free at low and high pressure, whatever the temperature.

The receptacles are tested individually in connected and disconnected position.

Check valve prevents flow of gas when nozzle is disconnected.

Excellent flow rates make STÄUBLI standard size receptacles the best choice for **any** type of vehicle.

All STÄUBLI receptacles can be used with any STÄUBLI nozzle or with any nozzle complying with the NGV 1 and ISO 14469-1 or ISO 14469-3 requirements.

Stainless steel construction gives strength and durability.

Cycle tested to withstand more than 20,000 connections.



GMV 09

High flow - heavy duty

FOR REFUELLING OF HEAVY DUTY VEHICLES



ECE R 110

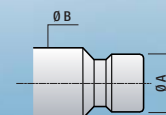
GMV 08 / C

Time flow - light duty

FOR REFUELLING OF LIGHT AND HEAVY DUTY VEHICLES

KEYING SYSTEM

Ensures that a 250 bar pressure nozzle cannot connect onto a 200 bar pressure receptacle but allows a 200 bar pressure nozzle to connect onto a 250 bar pressure receptacle.



PRESSURE	A (mm)	B (mm)
200 bar (3000 psi)	20.5	25
250 bar (3600 psi)	20.5	24

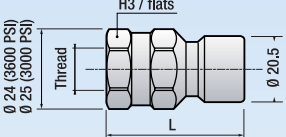
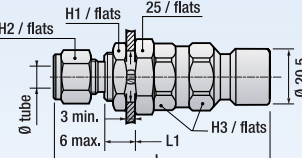
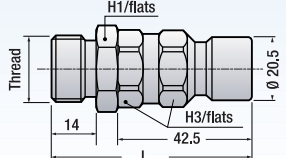
STORAGE REQUIREMENT

Use a dust cap to keep dust and water from entering the fuel system.

TECHNICAL DATA FOR GMV 08/C

- Internal diameter: 6 mm (1/4")
 - Material: stainless steel.
 - Service temperatures:
 - 40 °C to 120 °C
 - (- 40 °F to 250 °F).
 - Pressure range:
 - according to the NGV 1,
 - ISO 14469-1 and
 - ECE R 110: 200 bar (3000 psi)
 - ISO 14469-3: 250 bar (3600 psi).
 - Flow area:
 - 28 mm² (0.043 sq. in.)
 - Flow rate: see page 15.
- Important:**
The gas must be dry and clean.

PART-NUMBERS GMV 08/C RECOMMENDED FOR LIGHT AND HEAVY DUTY

Every receptacle is delivered with dust cap	THREAD OR Ø TUBE	DIMENSIONS (mm)						PART-NUMBERS		
								BLUE 200 bar (3000 psi) P 30 - B 200 profile	YELLOW 250 bar (3600 psi) P 36 - B 250 profile	
		L	L1	ØD	H1	H2	H3	CSA / NGV 1 	ECE R 110	CSA 
Receptacle female thread 	UN 9/16 - 18	42.5					23 (200 bar)	N 003 100 02	N 011 400 96	N 011 401 96
							22 (250 bar)			
Bulkhead mounted receptacle for tubing 	Ø 1/4"	83	15	16.5	23.8	14	23 (200 bar)	N 003 101 02	N 011 402 96	N 011 403 96
	Ø 3/8"	83	15	16.5	23.8	19		N 003 102 02	N 011 404 96	N 011 405 96
	Ø 1/2"	87	15	22.3	27	22		N 003 103 02	N 011 406 96	N 011 407 96
	Ø 6 mm	78	11	18.3	22	14	22 (250 bar)	N 003 104 02	N 011 408 96	N 011 409 96
	Ø 8 mm	79	11	18.3	22	17		N 003 105 02	N 011 410 96	N 011 411 96
	Ø 10 mm	80	11	18.3	22	19		N 003 106 02	N 011 412 96	N 011 413 96
	Ø 12 mm	87	15	22.3	22	22		N 003 107 02	N 011 414 96	N 011 415 96
Receptacle male thread 	G 1/2	73.5			25		23 (200 bar)	N 003 108 02	N 011 416 96	N 011 417 96
							22 (250 bar)			

For instructions of installation and use, see instruction sheet RV1210100

All dimensions in mm

RECEPTACLES WITH 80 µm FILTER

Available. Contact us.

SPECIFIC ASSEMBLY

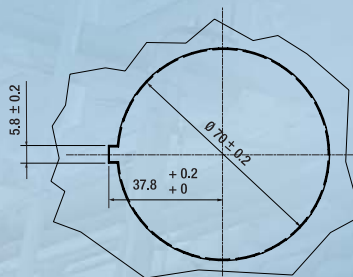
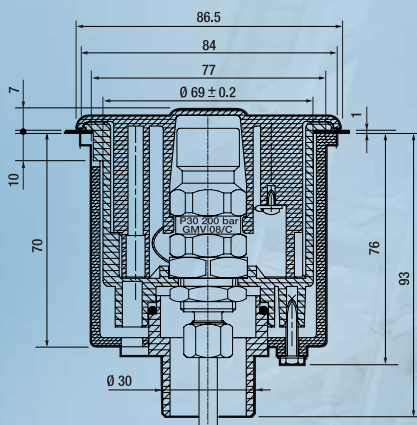
Available. Contact us.

MOUNTING POT

- Built-in housing to integrate GMV 08/C receptacle.
- Equipped to connect venting gas hose.
- Protective cap with stainless steel cord.



Part number: S 004 365 03



Drilling of the car body

TECHNICAL DATA FOR GMV/09

- Internal diameter: 9 mm (3/8")
 - Material: stainless steel.
 - Service temperatures:
- 40 °C to 85 °C
(- 40 °F to 185 °F).
 - Pressure range:
according to the NGV 1,
ISO 14469-1 and
ECE R 110:
200 bar (3000 psi)
ISO 14469- 3:
250 bar (3600 psi).
 - Flow area:
63 mm² (0.098 sq. in.)
 - Flow rate: see page 15.
- Important:**
The gas must be dry and clean.

PART-NUMBERS GMV 09 RECOMMENDED FOR HEAVY DUTY

Every receptacle is delivered with dust cap	FITTING	DIMENSIONS (mm)						PART-NUMBERS	
								BLUE 200 bar (3000 psi) P 30 - B 200 profile	YELLOW 250 bar (3600 psi) P 36 - B 250 profile
		L	L1	ØD	H1	H2	H3	ECE R 110	
Receptacle female thread 	G 1/2	43	50		32			N 002 592 02	N 004 153 01
Receptacle male thread 	UN 7/8-14	43	50		32			N 002 593 02	N 004 155 01
Bulkhead mounted receptacle female thread 	G 1/2	63	30.5	33	29		35	N 002 594 02	N 004 157 01
Bulkhead mounted receptacle for tubing 	Ø 1/2"	114	30.5	33	29	22	35	N 002 595 02	N 004 159 01

For instructions of installation and use, see instruction sheet RV1220100

DUST CAP FOR GMV 08/C AND GMV 09

	PART-NUMBERS	
	GMV 08.8550/30	

CHECK VALVE



GMV 09

ECE R 110



GMV 08 / C

ECE R 110

STÄUBLI check valves are designed specifically for high-flow NGV applications.

STÄUBLI NGV system components are designed to work together, assuring system integrity. We recommend to use on the same fuel line both STÄUBLI receptacle and check valve.

APPLICATIONS

- Designed to allow flow of gas in one direction only.
- Provides redundant leak protection in the fuelling line.
- Prevents station blow-back.
- Offers additional protection in a vehicle crash.

TECHNICAL DATA

Important: the gas must be dry and clean.

	GMV 08/C CHECK VALVE	GMV 09 CHECK VALVE
Material	stainless steel	stainless steel
Internal diameter	6 mm (1/4")	9 mm (3/8")
Flow area	28 mm ² (0.043 sq. in.)	63 mm ² (0.098 sq. in.)
Working pressure	260 bar (3 770 psi)	260 bar (3 770 psi)
Service temperatures	- 40 °C to 120 °C (- 40 °F to 250 °F)	- 40 °C to 85 °C (- 40 °F to 185 °F)

PART-NUMBERS GMV 08/C CHECK VALVES

	FITTING	DIMENSIONS (mm)			PART-NUMBERS
		B	C	H/FLATS	
	Ø 6 mm	18	56.5	14	N 006 502 02
	Ø 8 mm	18.5	57	17	N 006 503 02

For instructions of installation and use, see instruction sheet RV1230100

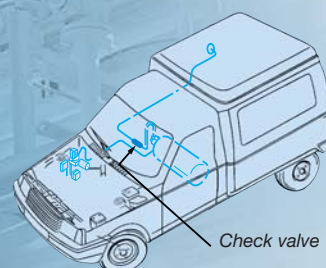
FITTINGS FOR GMV 08/C

	FITTING	DIMENSIONS (mm)			PART-NUMBERS
		B	C	H/FLATS	
	Ø 6 mm	18	38	14	N 009 330 98
	Ø 8 mm	18.5	38.5	17	N 009 331 98

PART-NUMBERS GMV 09 CHECK VALVES

	FITTING	PART-NUMBERS
		ECE R 110
	G 1/2	N 004 160 01

For instructions of installation and use, see instruction sheet RV1240100



STÄUBLI

IN LINE BREAK - AWAY



APPLICATIONS

- 2 models designed for Vehicle Refuelling Appliances:
 - **BRW 02:** for time fill.
 - **BRW 08:** for fast and time fill.
- Positioned in the refuelling hose so that the hose will breakaway if the car drives away with the nozzle connected.

In-line mounting: the break-away must be installed between 2 hoses of 500 mm (20 inches) min. length on both sides (vehicle and dispenser).

Automatically disconnects regardless of whether the system is pressurized or depressurized.

Upon disconnection of the breakaway, flow from the compressor is stopped instantaneously by a valve ; the check valve on the vehicle closes automatically preventing flow from the tank.

Safety and long life: due to the closing of the valve before disconnection (no shocks at disconnection).



BRW 02



BRW 08

CE Marking

BRW 02

Easy reconnection

By simply pushing together the mating parts.
Reconnection imperatively without pressure.

BRW 08

Easy reconnection

Simple and manual with a **specific reconnection tool**.

- Number of possible reconnections: 100.

■ TECHNICAL DATA FOR BRW 02

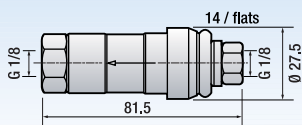
■ Working pressure:
200 bar (3 000 psi).
Higher working pressure:
consult us.

■ Material:
coated aluminium
and stainless steel.
■ Flow rate: see page 15.

■ Service temperatures:
- 40 °C to 85 °C
(- 40 °F to 185 °F).

Important:
The gas must be dry and clean.

■ BRW 02 FOR TIME FILL ONLY

THREAD		PART-NUMBERS
G 1/8 female thread		N 001 101 01

For instructions of installation and use, see instruction sheet RV1090100

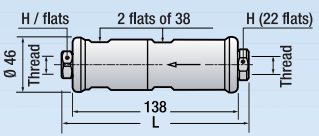
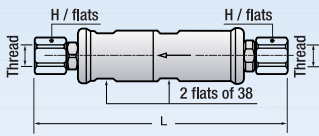
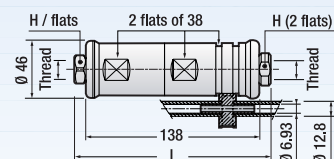
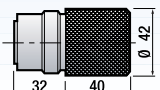
■ TECHNICAL DATA FOR BRW 08

■ Working pressure:
300 bar (4 350 psi)
■ Material:
brass and stainless steel.

■ Flow rate: see page 15.
■ Service temperatures:
- 40 °C to 85 °C
(- 40 °F to 185 °F).

Important:
The gas must be dry and clean.

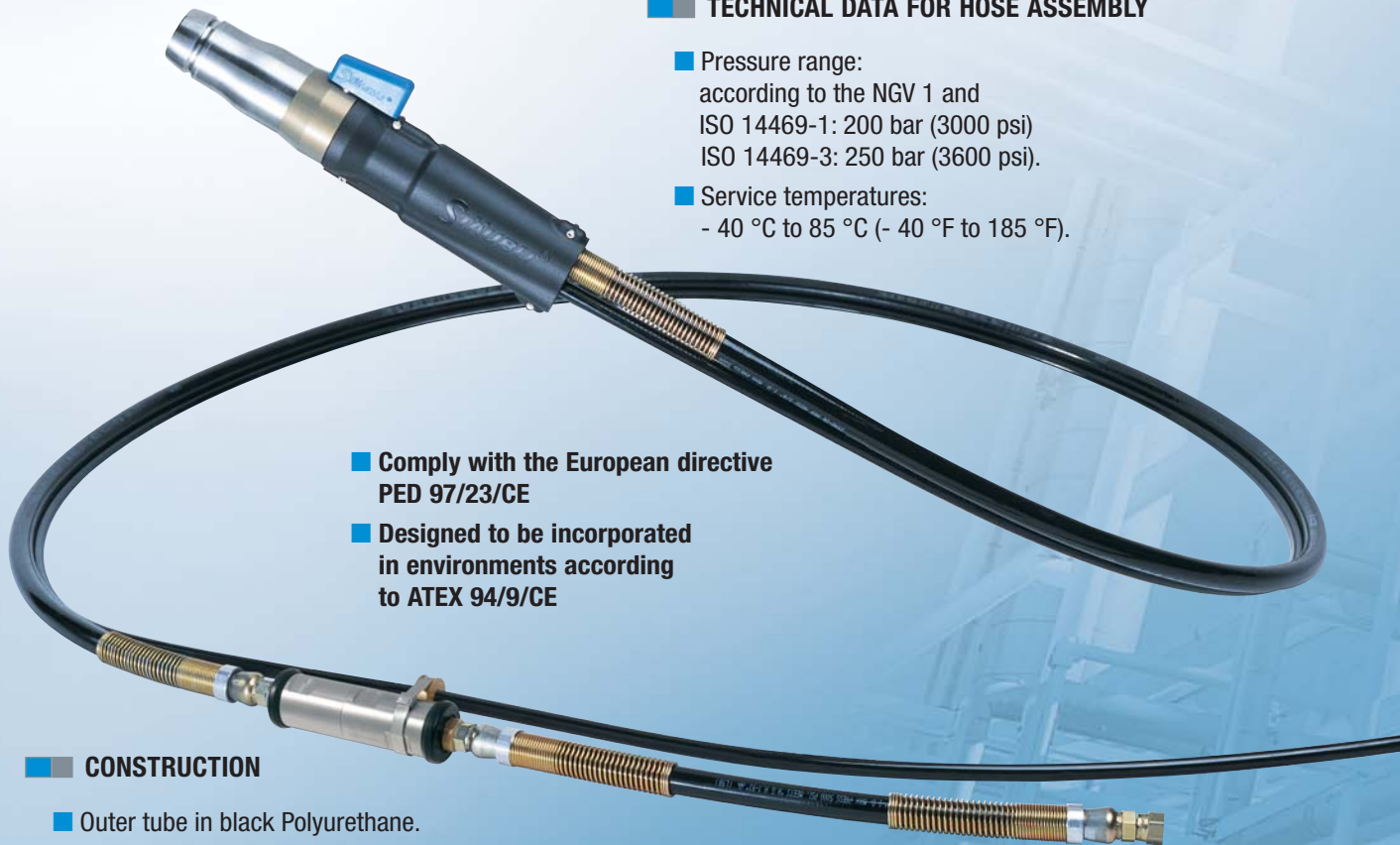
■ BRW 08 FOR TIME AND FAST FILL

THREAD		DIMENSIONS (mm)		PART-NUMBERS
		L	H	
UN 9/16-18 female thread		155	22	BRW 08.9314
G 3/8 female thread		201	24	BRW 08.9102
G 1/2 female thread		207	27	BRW 08.9103
UN 7/8-14 female thread		211	32	BRW 08.9322
UN 9/16-18 female thread with vent connection		155	22	N 003 487 01
Reconnection tool				BRW 08.9100

For instructions of installation and use, see instruction sheet RV1070100

All dimensions in mm

REFUELLING LINES READY TO USE



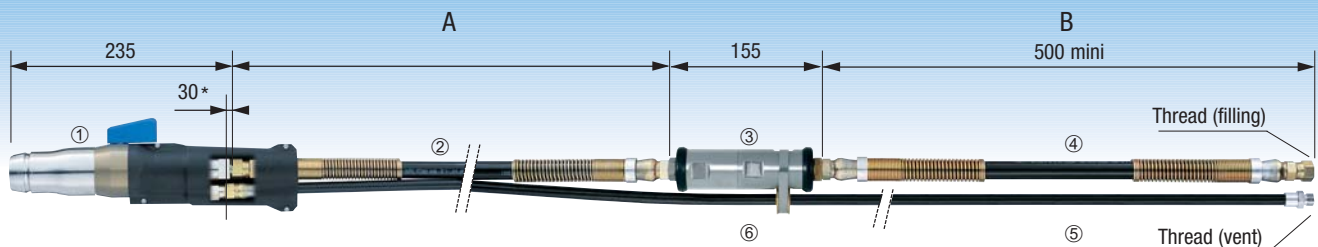
TECHNICAL DATA FOR HOSE ASSEMBLY

- Pressure range:
according to the NGV 1 and
ISO 14469-1: 200 bar (3000 psi)
ISO 14469-3: 250 bar (3600 psi).
- Service temperatures:
- 40 °C to 85 °C (- 40 °F to 185 °F).

- Comply with the European directive
PED 97/23/CE
- Designed to be incorporated
in environments according
to ATEX 94/9/CE

CONSTRUCTION

- Outer tube in black Polyurethane.
 - Reinforcement in synthetic fibre braid.
 - Electroconductive inner tube in Polyamide (PA).
- Standard twin hoses fitting the filling and vent circuits.
Low volume expansion.



* The filling hose must be 30 mm shorter than the venting hose.

When asking for a quote, please specify the hoses A and B.

- ① Type 1 nozzle
- ② Twin hose assembly (fill and vent)
- ③ Filling line break-away
- ④ Filling hose
- ⑤ Venting hose
- ⑥ Venting line break-away

	LENGTH		PART-NUMBERS	
			200 bar (3000 psi) P 30 - B 200 profile	250 bar (3600 psi) P 36 - B 250 profile
Light duty assembly hose	4.89 m	3/8" hose	N 007 213 00	N 007 214 00
Heavy duty assembly hose	4.89 m	1/2" hose	N 007 211 00	N 007 212 00

AVERAGE FILLING FLOW OF THE NGV RANGE

METHOD OF MEASUREMENT (according to the proposed standard ISO 14 469)

- Test fluid: air.
- Filling at 200 bar of a 30 litres receiver tank: R₂
- Storage:
300 litres at initial pressure of 240 bar: R₁
- Measurement of the filling time of the receiver tank R₂ from 0 to 200 bar.
- Measurement of the pressure in the receiver tank R₂ 3 hours later (temperature balance).

- Calculation of the average flow according to the ISO/DIS 14 469 formula:

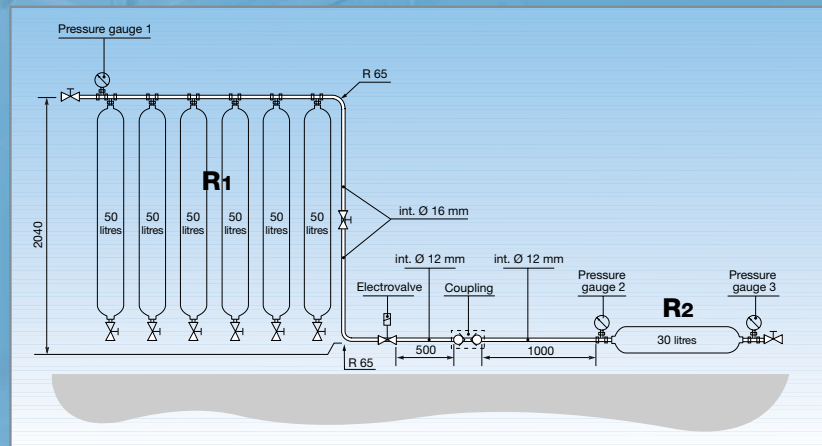
$$Q = \frac{30 \times P \times 60}{1.013 \times t}$$

with

Q = average flow in (NI/mn)

P = final pressure of the receiver tank R₂ after 3 hours (bar).

t = filling time (s).



NOZZLE	RECEPTACLE	AVERAGE AIR FLOW
Nozzle GMV 09 	Receptacle GMV 09 	3320 Nm ³ /h 1950 scfm
Nozzle GMV 09 	Receptacle GMV 08/C 	2360 Nm ³ /h 1400 scfm
Nozzle CMV 08/2 	Receptacle GMV 09 	3230 Nm ³ /h 1900 scfm
Break-away BRW 08 		2780 Nm ³ /h 1640 scfm
Break-away BRW 02 		95 Nm ³ /h * 56 scfm

* Initial pressure in the tank R₁: 230 bar (3335 psi)

The flow measurements are performed in laboratory with air.

The same test, performed with natural gas, would give equal or higher results.

RESULT

- Average air flow of filling from 0 to 200 bar (3000 psi) (air).
- Initial pressure in the tank R₁: 240 bar (3480 psi).
- Initial pressure in the receiver tank R₂: 0 bar.
- Upstream to downstream volume ratio: 10.

- Sales coordination
 ■ Stäubli subsidiaries
 ● Distributors

CONNECT WITH STÄUBLI ALL OVER THE WORLD

UNITED KINGDOM

STÄUBLI (UK) Ltd
 Lodge Park,
 Hortonwood 30,
 TELFORD Shropshire TF1 7ET
 Tel.: ++44 (0) 1952 671 918
 Fax: ++44 (0) 1952 608 579
 e-mail: connectors.uk@staubli.com

NORTH AMERICA

(USA, Canada, Mexico)
STÄUBLI CORPORATION
 P.O. Box 189 - DUNCAN S.C. 29334
 Tel.: ++1 864/433-1980
 Fax: ++1 864/486-5498
 Toll free Number: 800/845 - 9193
 e-mail: connectors.usa@staubli.com

BELGIUM

STÄUBLI BENELUX
 8501 BISSEGEN - Tel.: ++32 (0) 56 36 40 03
 e-mail: connectors.be@staubli.com

BRAZIL

**STÄUBLI COMÉRCIO, IMPORTAÇÃO,
 EXPORTAÇÃO E REPRESENTAÇÕES LTDA**
 04709 110 SÃO PAULO-SP
 Tel.: ++55 (0) 11 5182 7600
 e-mail: connectors.br@staubli.com

CHINA

STÄUBLI (HANGZHOU) MECHATRONIC CO. LTD.
 Hangzhou Economic & Technological
 HANGZHOU 310018
 Tel.: ++86 571 86912161
 e-mail: connectors.cn@staubli.com

CZECH REPUBLIC, SLOVAKIA, HUNGARY

STÄUBLI Systems s.r.o.
 530 03 PARDUBICE
 Tel.: ++420 466 616 125
 e-mail: connectors.cz@staubli.com

FRANCE

STÄUBLI RACCORD FRANCE
 91882 MASSY Cedex - Tel.: ++33 (0)1 69 93 25 00
 e-mail: srf@staubli.com

GERMANY, AUSTRIA

STÄUBLI Tec-Systems GmbH
 95410 BAYREUTH - Tel.: ++49 (0) 921/883-80
 e-mail: connectors.de@staubli.com

ITALY

STÄUBLI ITALIA S.p.A.
 20048 CARATE BRIANZA - Tel.: ++39 (0) 362/944.1
 e-mail: connectors.it@staubli.com

JAPAN

STÄUBLI KK
 OSAKA 532-0011 - Tel.: ++81 6 6889 3308
 e-mail: connectors.stkk@staubli.com

POLAND

STÄUBLI Lodz Sp. z o.o.
 90319 LODZ
 Tel.: ++48 42 636 85 04

PORTUGAL

STÄUBLI PORTUGAL REPRESENTAÇÕES LDA
 4475-330 MILHEIROS - MAIA
 Tel.: ++351 22 978 39 56/50

SINGAPORE

Multi-Contact SEA Pte Ltd - STÄUBLI
 SINGAPORE 159 554
 Tel.: ++65 / 6266 0900

SPAIN

STÄUBLI ESPAÑOLA
 08205 SABADELL
 (Barcelona)
 Tel.: ++34 937 205 405
 e-mail: connectors.es@staubli.com

SWITZERLAND

STÄUBLI A.G.
 8810 Horgen/ZÜRICH
 Tel.: ++41 (0) 43/244 22 33
 e-mail: sales.couplings@staubli.com

TAIWAN

STÄUBLI (HK) LTD
 TW - 104 TAPEI
 Tel.: ++886 2 2568 2744
 e-mail: taiwan@staubli.com

TURKEY

**STÄUBLI SANAYI MAKINE
 VE AKSESUARLARI TİCARET LTD. STİ.**
 34670 İKİTELLİ
 İSTANBUL
 Tel.: ++90 212/472 13 00
 e-mail: connectors.tr@staubli.com

INTERNATIONAL SALES COORDINATION

STÄUBLI FAVERGES - B.P. 70 - F - 74210 FAVERGES - Tel.: ++33 (0) 4 50 65 67 97 - Fax: ++33 (0) 4 50 65 60 69
 Internet : <http://www.staubli.com> - e-mail : connectors.sales@staubli.com
 Stäubli is a trademark of Stäubli International AG, registered in Switzerland and other countries.

STÄUBLI