miniNAV®

The MIETHKE Differential Pressure Valve

Aesculap Neurosurgery

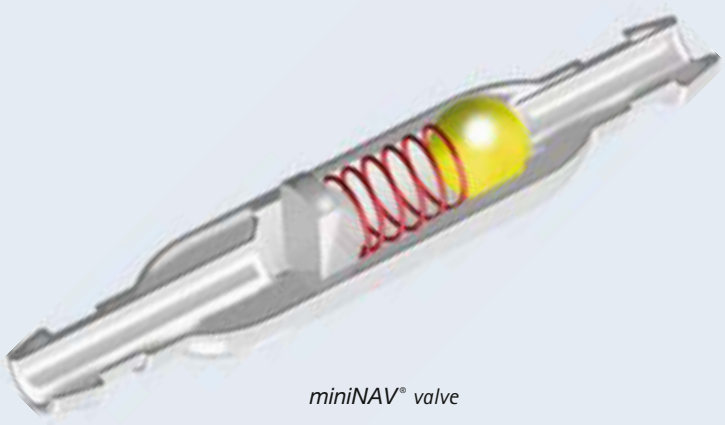
B BRAUN
SHARING EXPERTISE

miniNAV®

The Valve

The *miniNAV*® is the world's smallest differential pressure valve with reliable drainage control for hydrocephalus therapy. With its special design and slimline shell it is the ideal valve for the treatment of premature and newborn infants.

Another field of application is hydrocephalus in bedridden patients. For active patients we recommend combining the *miniNAV*® with the *SHUNTASSISTANT*®, the *paediSHUNTASSISTANT*® or the new programmable Miethke shunt *proSA*®.



miniNAV® *valve*

Your Choice:

The opening pressure of the valve should be selected according to the individual patient and anamnesis. *miniNAV*® is available in four different pressure level settings.
Each pressure level is specially coded, enabling the valve to be identified on post-operative X-rays. E. g. if the valve has a concave (inward curved) shape at the proximal end and a convex (outward curved) shape at the distal end, the pressure level is 5 cmH_2O.

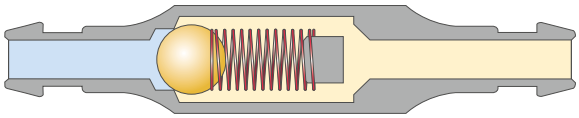
Opening pressure (cmH_2O)	Codeing *miniNAV*® on X-ray
0	
5	
10	
15	

The Function

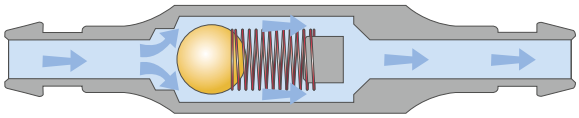
Supine Function

- The *miniNAV*® is suitable for bedridden patients and, due to its size, especially for premature or newborn infants.
- For active patients, who stand up or sit, we recommend combining the *miniNAV*® with a *SHUNTASSISTANT*®, a *paediSHUNTASSISTANT*® or a *proSA*®.

miniNAV® closed:



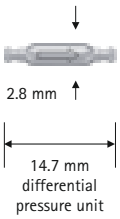
miniNAV® open:



miniNAV®

miniNAV®

- Single valve



Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV660T**	**10**

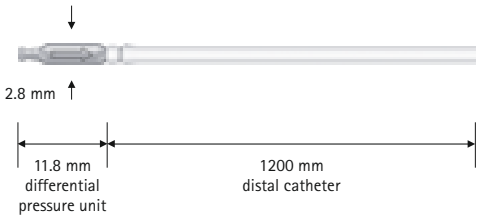
- Special pressure levels

FV658T	0***
FV659T	5
FV661T	15

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

miniNAV® with integrated distal catheter

- Valve with integrated distal catheter



Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Opening pressure (cmH_2O*)
FV664T**	**10**

- Special pressure levels

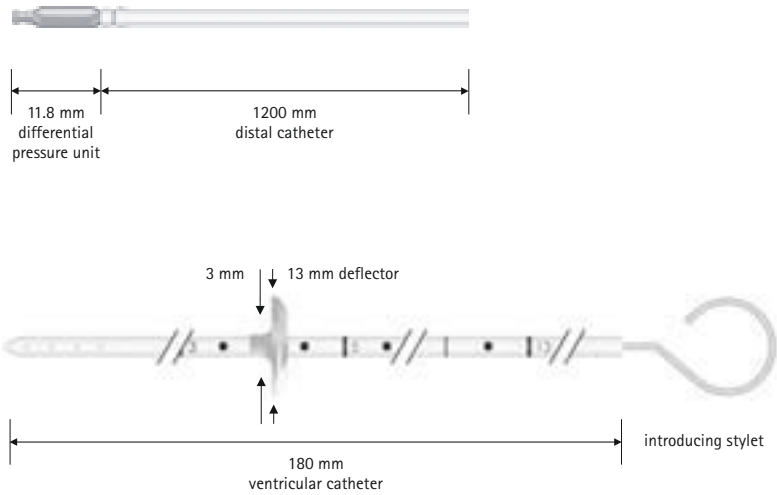
FV662T	0***
FV663T	5
FV665T	15

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

miniNAV®

miniNAV® SHUNTSYSTEM

- Valve with integrated distal catheter
- Ventricular catheter with introducing stylet and pediatric deflector



Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV668T**	**10**

- Special pressure levels

FV666T	0***
FV667T	5
FV669T	15

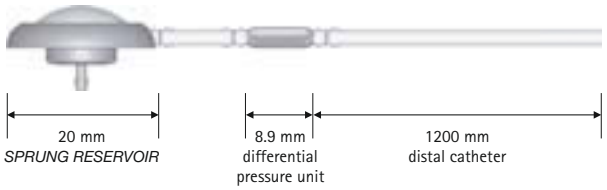
* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

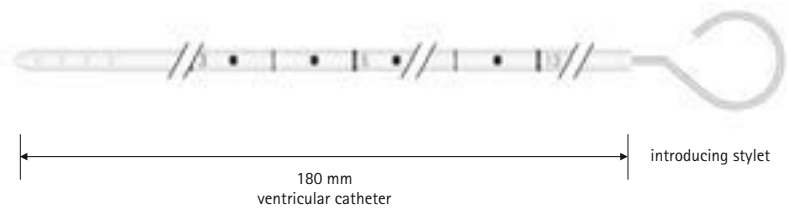
miniNAV® SHUNTSYSTEM with SPRUNG RESERVOIR

- Valve with integrated distal catheter and integrated *SPRUNG RESERVOIR**

  **Flushing reservoir allows for the checking of the ventricular catheter´s patency and ensures only distal drainage.*

- Ventricular catheter with introducing stylet





Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV672T**	**10**

- Special pressure levels

FV670T	0***
FV671T	5
FV673T	15

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

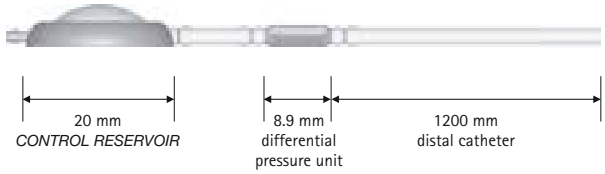
miniNAV®

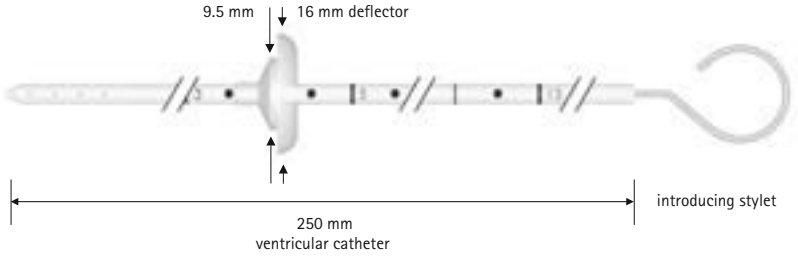
miniNAV® SHUNTSYSTEM with CONTROL RESERVOIR

- Valve with integrated distal catheter and integrated *CONTROL RESERVOIR**

  **Flushing reservoir allows for the checking of the ventricular catheter´s patency and ensures only distal drainage.*

- Ventricular catheter with introducing stylet and deflector





Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV676T**	**10**

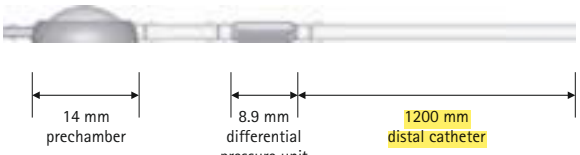
- Special pressure levels

FV674T	0***
FV675T	5
FV677T	15

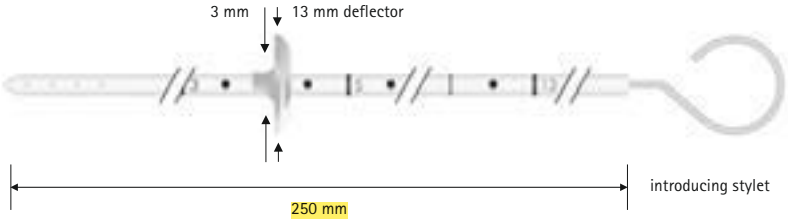
* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

miniNAV® SHUNTSYSTEM with pediatric prechamber

- Valve with integrated distal catheter and integrated pediatric prechamber
- Ventricular catheter with introducing stylet and pediatric deflector



distalinis (peritoninis) kateteris



ventrikulinis kateteris

Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV680T**	**10**

- Special pressure levels

FV678T	0***
FV679T	5
FV681T	15

1 pirkimo dalis

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

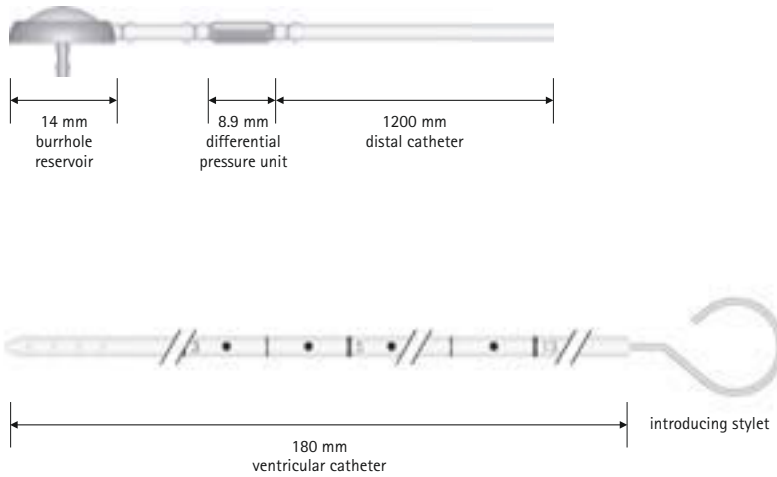
miniNAV®

miniNAV® SHUNTSYSTEM with pediatric burrhole reservoir

- Valve with integrated distal catheter and integrated pediatric burrhole reservoir*

  **Flushing reservoir allows for the checking of the ventricular catheter´s patency and ensures only distal drainage.*

- Ventricular catheter with introducing stylet



Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV684T**	**10**

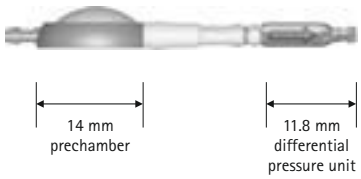
- Special pressure levels

FV682T	0***
FV683T	5
FV685T	15

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.
*** For prevention of reflux only

miniNAV® with pediatric prechamber

- Valve with integrated pediatric prechamber



Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Scale 1:1

Art. no.	Differential pressure unit (cmH_2O*)
FV688T**	**10**

- Special pressure levels

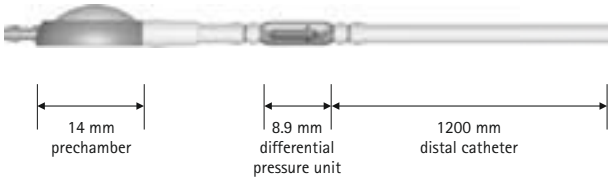
FV686T	5

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.

miniNAV®

miniNAV® with distal catheter and pediatric prechamber

- Valve with integrated pediatric prechamber and integrated distal catheter



Scale 1:1

Connector: do= 1.9 mm
Diff. pressure unit: do= 2.8 mm
Catheter: di = 1.2 mm, do= 2.5 mm

Art. no.	Differential pressure unit (cmH_2O*)
FV689T**	**10**

- Special pressure levels

FV687T	5

* 1 cmH_2O = 0.74 mmHg
** Standard pressure level These guide values are not binding.
Other specifictaions may be preferable depending on the individual patient and anamnesis.

Our Shunt Systems – Your Choice

Shunt System		Description	Indication				Patient		Grav.-assist.*	MRT-comp. 3 Tesla
			adult HC	ped. HC	NPH	LP	active	bed ridden		
proSA®		Adjustable gravitational unit with differential pressure valve	✗	✗	✗		✗	✗	✗	✗
proGAV®		Adjustable differential pressure valve with gravitational unit	✗	✗	✗		✗	✗	✗	✗
GAV®		Gravitational valve for adult hydrocephalus	✗		✗		✗		✗	✗
paediGAV®		Gravitational valve for pediatric hydrocephalus		✗			✗		✗	✗
SHUNTASSISTANT®		Gravitational unit for integration in shunt systems, to prevent overdrainage	✗	✗	✗		✗		✗	✗
DUALSWITCH® VALVE		Gravitational valve for extra large CSF flow volume	✗		✗	✗	✗		✗	✗
miniNAV®		Differential pressure valve especially for premature and newborn infants or recumbent, non-active patients	✗	✗				✗		✗
Accessories										

Aesculap, Tuttlingen

Miethke, Potsdam

Alliance for innovations

When two strong partners combine their expertise, innovative and groundbreaking solutions frequently arise that would scarcely have been possible working alone.

Aesculap and Miethke have followed this path and have been cooperating since 1999. In 2010 the successful partnership has been further strengthened, with the shareholding by Aesculap AG in Miethke GmbH & Co. KG. The goal was and is to develop better solutions for the difficult treatment of hydrocephalus and to make them available all over the world.

This vision has inspired and motivated everyone involved. An intensive dialogue was initiated with customers, doctors and patients about the problems associated with this complex medical condition. New solutions were developed and discussed in small circles of experts and scientific symposia.

The eventual outcome of this fruitful process was the market introduction of a gravitational unit – which can effectively reduce overdrainage of cerebrospinal fluid. A unique product worldwide, and a milestone in modern hydrocephalus therapy.

What has already been achieved is only the beginning. For us, it is a duty and a necessity to continue along the path we have begun. In the patients' interest we will carry on our extensive investment into research and development and will not tire of learning more, collecting new insights and remaining open for future developments.

We will continue to venture in new directions and cross frontiers in order to be able to help where no solutions have yet been found.

proSA® –

Your simple choice for precise patient care

Aesculap Neurosurgery

- New generation of adjustable MIETHKE shunts
- Unique treatment options for hydrocephalus patients
- Wide adjustment range from 0 to 40 cmH_2O
- 3 Tesla MRI conditional
- Effective treatment against overdrainage
- No inadvertent readjustments by external magnetic fields

Aesculap – a B. Braun company

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Manufacturer acc. MDD 93/42/EEC

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