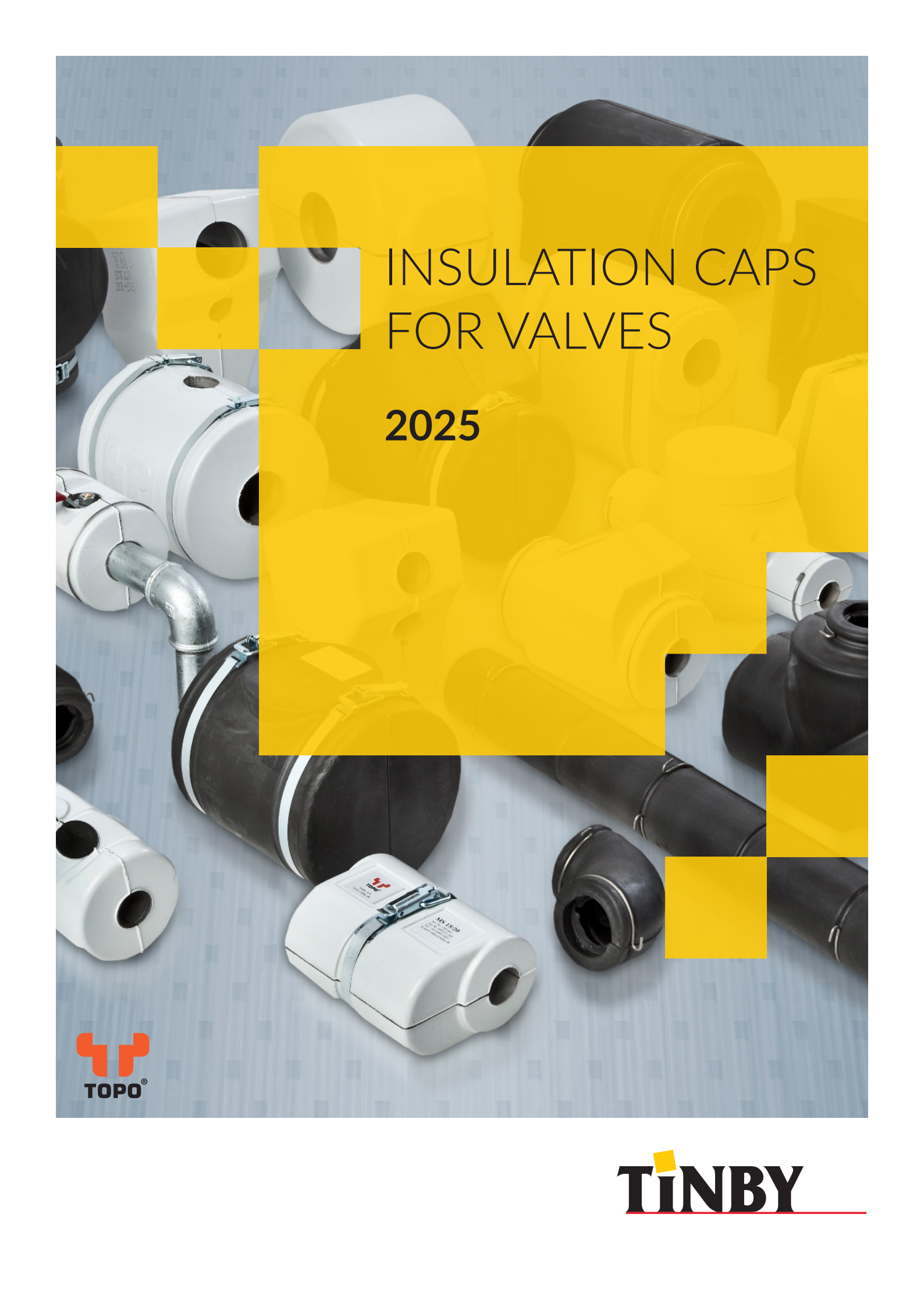




INSULATION CAPS FOR VALVES

2025



THE ENERGY SAVING AND ASSEMBLY FRIENDLY INSULATION CAP SYSTEM

Polyurethane (PUR) is a type of plastic with particularly good insulating properties. Both cold and heat insulating, the foam is used in a variety of products and in the construction industry. If the insulating capacity plays a particularly important role, the low lambda value of less than 0.024 W / mK results in large energy savings. As duroplastic (hardened PUR) it can be formed into numerous shapes.

One of our best known products is the insulating cap. It is used for the insulation of venues and district heating installations. In addition, heat-insulating polyurethane is installed as insulating components in window profiles and strips.

Tinby offers a range of insulation caps for almost every manufacturer and fitting. All cutouts are made at the factory so that they can be mounted on site with just one hand. Maintenance work can be carried out easily and quickly in this way. The high quality of the insulating caps reduces the wear of the individual components even with frequent changes.

A uniform overall picture of the system insulation is provided by various surfaces: All insulating caps are available in polystyrene (PS) or aluminum coarse grain sheet, deepdrawn (AL).

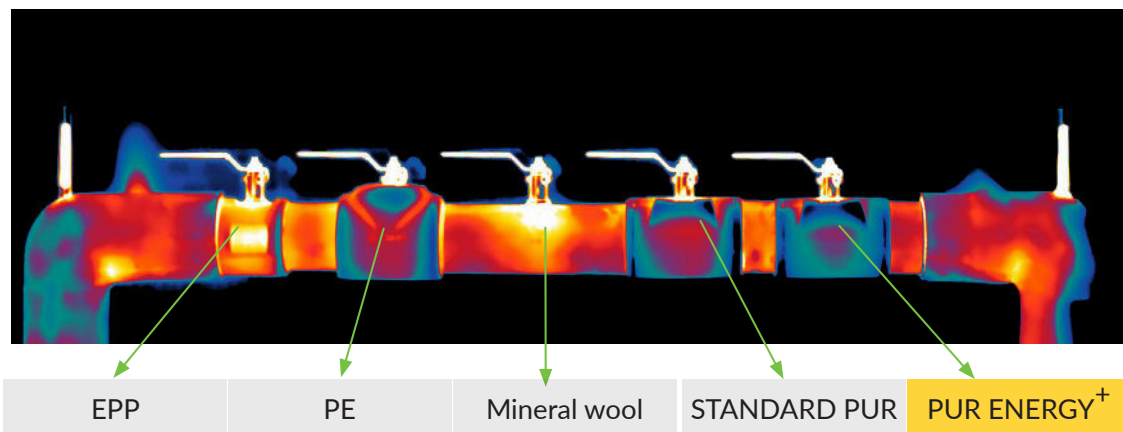
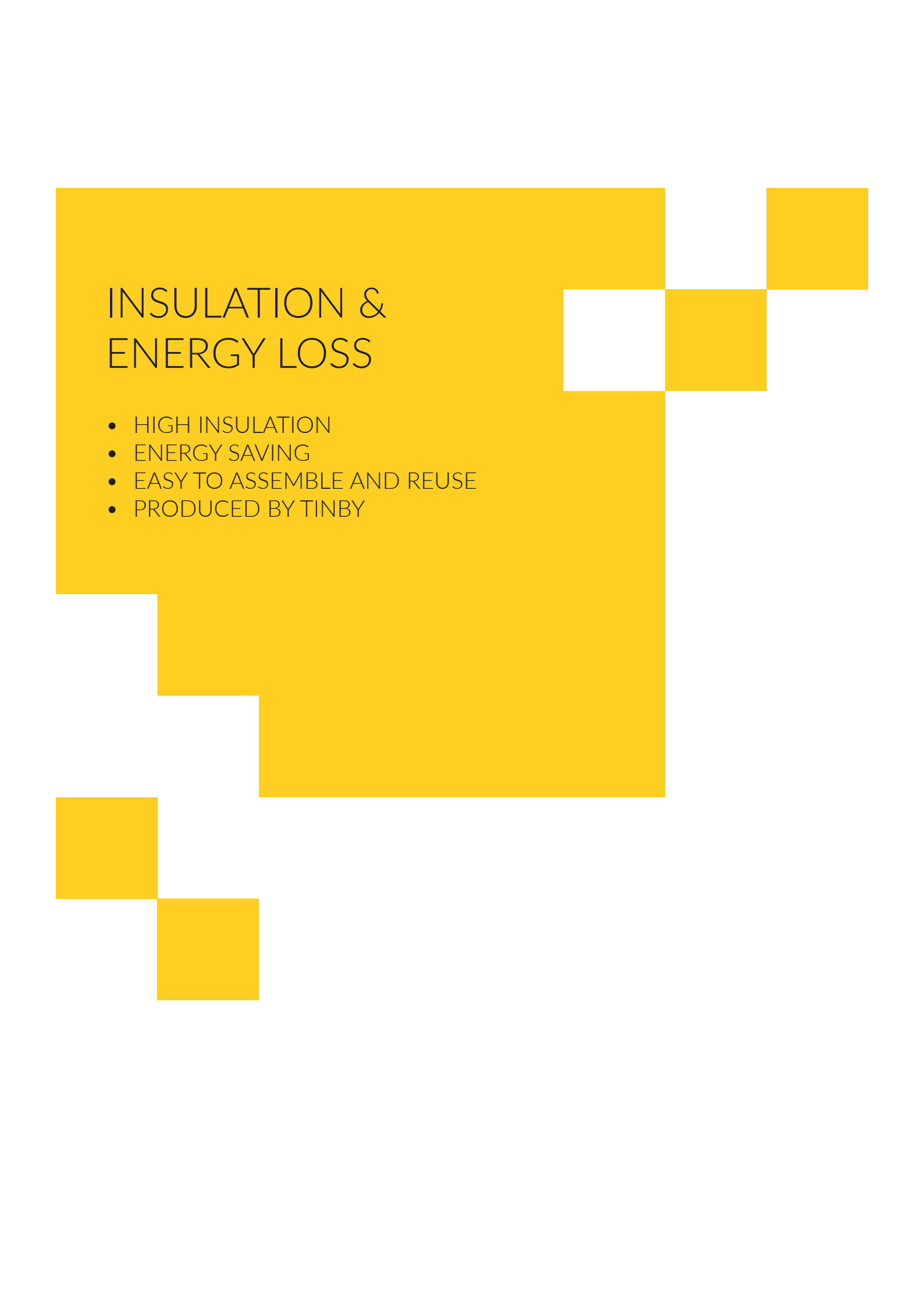


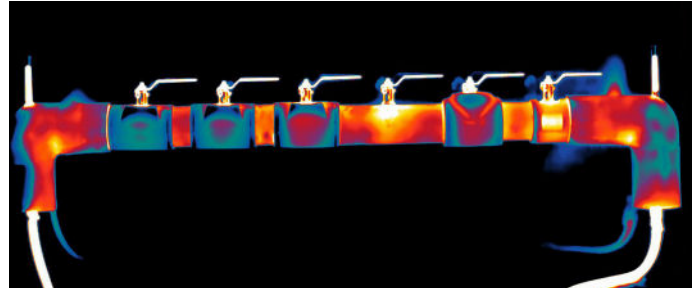
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The background of the slide features an abstract geometric pattern composed of various-sized yellow and white squares. A large yellow square occupies the upper-left portion of the slide. To its right, a horizontal row of squares includes a white square, a yellow square, and another white square. Above the yellow square on the far right is another yellow square. Below the large yellow square, there is a white square, followed by a yellow square, and then another white square. At the bottom left, there is a yellow square, and below it, a white square. The overall design is minimalist and modern.

INSULATION & ENERGY LOSS

- HIGH INSULATION
- ENERGY SAVING
- EASY TO ASSEMBLE AND REUSE
- PRODUCED BY TINBY



INSULATION CAPS

PRODUCED BY TINBY

To meet the global environmental challenges, reducing energy loss and thereby improve insulation new and preexisting buildings is necessary. Tinby produces and delivers insulation caps made from polyurethan (PUR) for the construction industry. They reduce the energy loss of buildings, can be reused with a simply change of valve and retains its high ability to insulate even small wall thickness. PUR-Insulation is a part of improving the energy efficiency of buildings and reducing the emission of CO₂.

In 2020 the European Union has passed regulation for buildings during both for new building and changes made to preexisting construction, which means that the loss of energy will be reduced by 30%. This reduction can be attained by better and smarter insulation in buildings.

HIGH INSULATION ABILITIES W/ A LOW FOAM THICKNESS

To achieve the high demands for insulation, you either need to use a thicker layer of insulation, which often won't be able to fit, or use insulation caps from Tinby. Because of the Lambda value in the caps the thickness of the foam is not increased. For that reason, they can be used with in smaller spaces. Both in the case of newer buildings and during renovations of existing buildings, the cap can be split with a simple tool and adapted on the spot.

Long term there is a large amount of the energy saved, because of the longevity of the material and the high performance throughout the building's lifetime.

REUSABLE

The insulation caps are easy to assemble on newer as well as preexisting installations and are developed to make the valves changeable without damaging the surrounding

FACTS ON TINBY'S INSULATION CAPS

- λ -value: 0,24 W/m°C
- Can handle most acids and is not attacked by rot, fungus or mildew.
- Fire Class B2 according to DIN 4102
- In the future the insulation caps from Tinby will be coated with polystyrol (PS). It is more sustainable when disposing.
- Pay-back period: 2 years (replacement of mineral wool, EPP or micro-cellular rubber: : 5 år)
- Tinby also offers pipe sections in PUR-foam without a shell. It is a beneficial insulation solution both economically and in safety that is also used against condensation.

insulation. The caps can handle most acids, is not attached by rot, fungus or mildew, does not attract moisture and as opposed to mineral wool is not heat conductive. Therefore, the insulation caps from Tinby can be reused.

PAY-BACK PERIOD

If you insulate used Tinby's polyurethan-foam you get a pay-back time of less than 2 years for newer buildings. If you replace the mineral wool, EPP or micro-cellular rubber the pay-back time is less than 5 years.

We have the material, technical knowhow and the production facilities.

TOPO ENERGY BOX ALU

Insulation corresponding to EnEV consisting of two molded foam half shells with sheathing made of aluminum coarse grain sheet metal, which are fixed with guide elements (tongue and groove system) and clamping straps. The surface of the Energy Box in ALU design is diffusion-tight. It can therefore also be used for the cold water area. At media temperatures below 12 ° C, all joints and joints must be protected against condensation by being carefully taped with aluminum adhesive tape; eventually it may additionally be sealed with silicone.



PUR-foam
Lambda = 0,024
Fire class B 2

Tensioning bands /
tension springs
made of corrosionresistant
material

Insulation

Material:	PUR-Foam
Insulation capability:	0,024 W/m*K
Weight:	60 kg/m³ +/- 5
Temperature for insulation:	max. +130° C
Fire class accordingly: DIN 4102:	B2, normal inflammable (highest possible classification for PUR foam!)

Shell

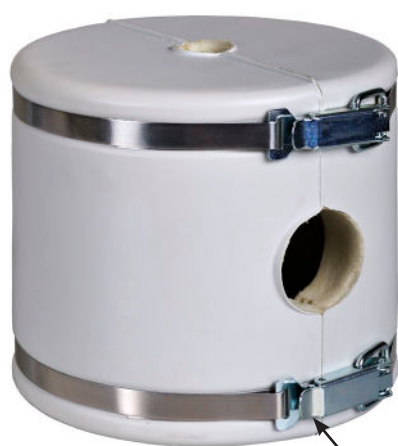
Material:	Aluminium foil (AL)
Color:	metal color, Aluminium
Fire class accordingly: DIN 4102:	A, not flammable

CONNECTION TECHNOLOGY

Tongue and groove system and outside clamping tongue / bands made of corrosion-resistant material

TOPO ENERGY BOX PS

The EnEV-compliant insulation consisting of two molded foam PUR half shells with PS sheath, which are fixed with guide elements (tongue and groove system) and straps. At media temperatures below 12 ° C, all joints and joints must be protected against condensation by being carefully sealed with silicone.



PUR-foam
Lambda = 0,024
Fire class B 2

Tensioning bands /
tension springs
made of corrosionresistant
material

Insulation

Material:	PUR-Foam
Insulation capability:	0,024 W/m*K
Weight:	60 kg/m³ +/- 5
Temperature for insulation:	max. +130° C
Fire class accordingly: DIN 4102:	B2, normal inflammable (highest possible classification for PUR foam!)

Shell

Material:	Polystyrene (PS)
Color:	Grey (RAL 7035)
Fire class accordingly: DIN 4102:	B1, svært antændeligt

CONNECTION TECHNOLOGY

Tongue and groove system and outside clamping tongue / bands made of corrosion-resistant material

TOPO DHS INSULATION CAPS FOR DISTRICT HEATING SYSTEMS

Insulation corresponding to EnEV consisting of two molded foam half-shells which are fixed with guide elements (tongue and groove system) and clamping straps. At media temperatures below 12 ° C, all joints and joints must be protected against condensation by being carefully sealed with silicone.



PUR-foam
Lambda = 0,024
Fire class B 2

Tensioning bands /
tension springs
made of corrosionresistant
material

MATERIAL	
Material:	PUR-Foam
Insulation capability:	0,024 W/m*K
Weight:	60 kg/m³ +/- 5
Temperature for insulation:	max. +130° C
Fire class accordingly: DIN 4102:	B2, normal inflammable (highest possible classification for PUR foam!)

INSULATION SHELL	
Material:	-
Color:	-
Fire class accordingly DIN 4102:	-

THE SOLUTION IS A TOPO ENERGY BOX INSULATION CAP

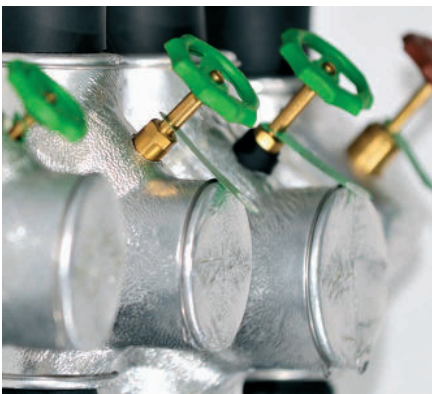
A TOPO Energy Box insulation cap is a insulation unit, which can easily be assembled, disassembled and reused without the need for tools. TOPO Energy Box insulation caps effectively solves a variety of insulation tasks for valves. Polyurethan has a practical lambda value of less than 0,028 W/m°C. Therefore, a large sum of energy is saved by using insulation caps from Tinby. TOPO insulation caps are tried and approved for fire call B2 after DIN 4102. Referring to Technische Universität Braunschweig, Germany, Report no. 3207/8950-a-Fe/wi.

EASY TO ASSEMBLE

TOPO caps are made to easily adapt with a saw or knife. The adaptation is necessary for many older installations, where the distance between pipe and wall is not prepared for insulation.

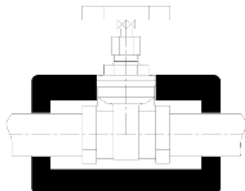
TOPO caps are a standard program that fits most valves. If there is a need for an insulation cap that is not found in our standard program, Tinby can execute to job from idea to finished product.

- High insulation capacity with a low wall thickness.
- Easy to assemble and disassemble on both new and pre existing installations.
- Can be reused.
- Can be assembled to make the insulation diffusion tight (the installation is protected against condensation and corrosion).
- Can be used in narrow spaces, because of the ability to split and adapt the cap using few tools.
- They are developed to make sure valves can be changed without damaging the surrounding insulation.
- Fire Class B2 according to DIN 4102.
- Can handle most acids and is not attacked by rot, fungus or mildew.
- Does not draw moisture and as opposed to mineral wool it is not diathermic.
- The caps are coated with a plastic film on the outside.

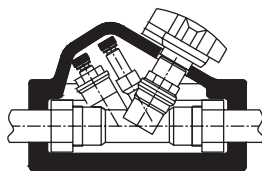


TYPE OVERVIEW WITH SOCKET CONNECTION

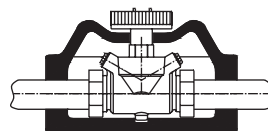
Serie GVM (p. 23)
for gate valves, straight seat valves
and check valves with socket
connection



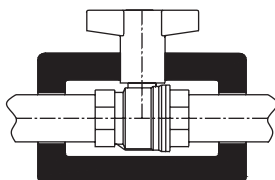
Serie HCM (p. 19)
for TA rotary seat
valves in sleeve design



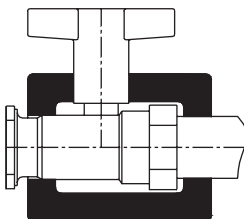
Serie HSG (p. 20)
Kemper Mulitherm, Heimeier-
Stra-to and Heimeier-Vario



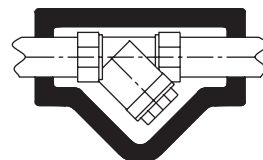
Serie KHM (p. 21)
for ball valves
with socket
connection



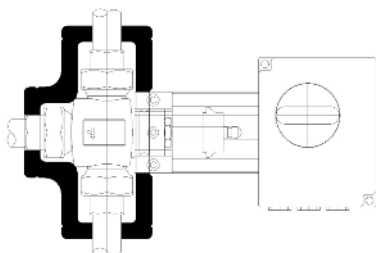
Serie PKH (p. 22)
for pump ball valves



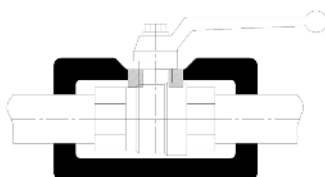
Serie SFM p. 25)
Strainers and check valves in sleeve
design



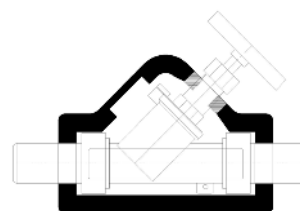
Serie DWM (p. 24)
til trevejsventiler med
muffetilslutning



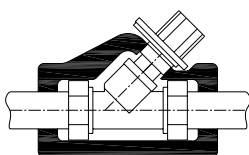
Serie UKM (p. 18)
for all common ball
valves



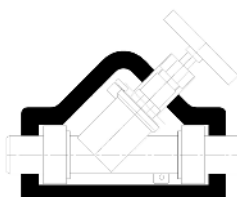
Serie USV (p. 18)
all common angle
seat valves



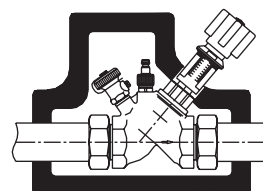
Serie SVK (p. 16)
for angle seat valve
MNG-Kombi II and III



Serie SVM ps. 15)
for valves with angularly seated
spindle and socket connection

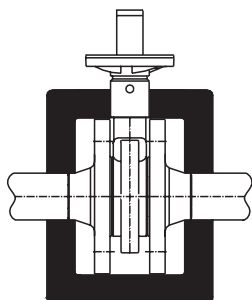


Serie OMG (p. 17)
for Oventrop Hydrocontrol
with socket connection

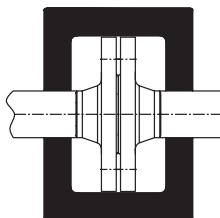


TYPE OVERVIEW WITH FLANGE CONNECTION

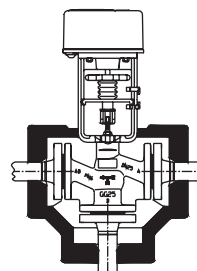
Serie BSC (p. 26)
for KSB
Boa Super Compact



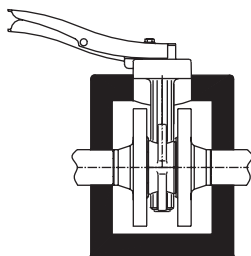
Serie FPA (p. 27)
for bottle pairs and
blind flanges



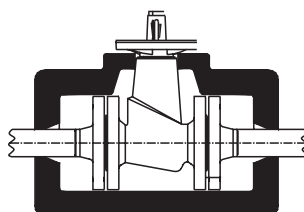
Serie DWV (p. 28)
for three-way control
valves with flanged
connection



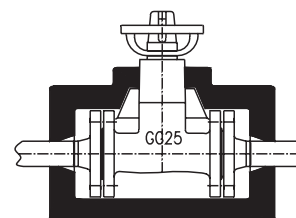
Serie FKL (p. 29)
for butterfly valves, flap
check valves and
compensators



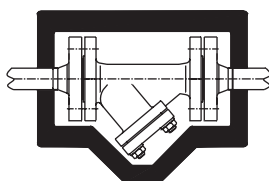
Serie FVK (p. 30)
for short ball, diaphragm,
straight seat and flange valves
to DIN length F4



Serie FVL (p. 31)
for long ball, diaphragm, straight
seat and flange valves to DIN length
F1



Serie SVF (p. 32)
for strainers, angle seat and freeflow
valves with flange connection



VALVE OVERVIEW

ABA BEUL		Type
	Piston valve with threaded connection	GVM
	Regulating valve with threaded connection	SVK
ARI		
	Shut-off valve Euro Wedi, FTF 1	FVL
	Shut-off valve Euro Wedi, AGV 14	FVK
	Shut-off valve FABA-Plus, FTF 1	FVL
	Line regulating valve Astra, FTF 1	FVL
	Check valve with flange connection	SVF
	Dirt trap with flange connection	SVF
	Disc check valve CHECKO-D	FKL
	Butterfly valve type ZESA	FKL
	Butterfly valve type GESA	FKL
Bender		
	Straight seat valve with threaded connection	GVM
	Angle seat valve with threaded connection	USV
	Strainer with threaded connection	SFM
	Ball valve with threaded connection	UKM
	Piston spool with threaded connection	GVM
Böhmer		
	Ball valve with threaded connection	UKM
Broen		
	Ball valve with threaded connection	UKM
Bruse		
	Angle seat valve with threaded connection	USV
	Ball valve with threaded connection	UKM
DANFOSS		
	Control valve Three-way flange	DWV
	Control valve two-way flange	FVL
	Control valve Three-way sleeve	DWM
	Control valve white way sleeve	GVM
	Dirt trap with flange connection	SVF
	String valves with threaded connection	HCM
DURAMAR		
	Ball valve with threaded connection	UKM
	Angle seat valve with threaded connection	USV
	Sleeve slide, check valve	GVM
	Pump slide with threaded connection	PKH
EBRO Armaturen		
	Butterfly valve type Z 011	FKL
	Check valve type RSK	FKL
	Backflow barrier type RV 10	SVF
FROMME Armaturen		
	Wedge flat slide, FTF 14	FVK
	Through valve, FTF 1	FVL
	Strainer	SVF
G-Bee		

	Ball valve with threaded connection	UKM
GEFA		
	Butterfly valves	FKL
	Ball valve with threaded connection	KHM
GESTRA		
	Gravity circulation	FKL
	DISCO check valve	FKL
	Strainer with threaded connection	SFM
	Dirt catcher with flange connection	SVF
	Intermediate flange Strainer SZ	FKL
	Shut-off valves GAV	FVL
GIACOMINI		
	Ball valve with threaded connection	UKM
	Gate valve	GVM
	Strainer with threaded connection	SFM
	Check valve with threaded connection	SFM
HERMANN SCHMIDT		
	Gate valve	GVM
	Angle seat valve with threaded connection	USV
	Check valve with threaded connection	SFM
	Strainer with threaded connection	SFM
	Ball valve with threaded connection	UKM
HONEYWELL		
	Strainer with threaded connection	SFM
	Dirt trap with flange connection	SVF
	Free-flow valve Alwa	USV
	Throttle valve Alwa-Kombi-4	SVK
	MNG KOMBI III Plus	SVK
	MNG KOMBI II (without emptying)	SVK
	Line regulating and shut-off valve Kombi-F	FVL
	Ring throttle	FKL
	Centra through valve flange	FVL
	Centra through valve thread	GVM
	Centra three-way mixer with sleeve	DWM
	Centra three-way mixer with flange	DWV
	Centra three-way valve flange	DWV
	Centra three-way valve thread	DWM
IMT		
	Ball valve with threaded connection	UKM
	Strainer with threaded connection	SFM
	Check valve with threaded connection	SFM
JRG Gunzenhauser		
	Gate valve	GVM
	Ball valve with threaded connection	UKM
	Angle seat valve with threaded connection	USV
KEMPER		
	Flange fittings, FTF1	FVL
	Angle seat valve with flange connection	SVF
	Sleeves straight seat	GVM
	Multi-Therm Circulation Control Valve	HSG
	Combined backflow preventer	SVM
	Multi-Fix Circulation Control Valve	SVK
	Angle seat valve without draining	USV
	Angle seat valve with drain	OMG
	Strainer with threaded connection	SFM

VALVE OVERVIEW

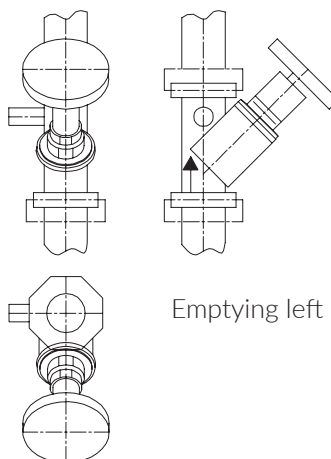
KIEBACK+PETER		
	3-way valve with flange connection	DWV
	2-way valve with flange connection	FVL
	3-way valve with threaded connection	DWM
	2-way valve with threaded connection	GVM
KLINGER		
	Kugelhahn mit Gewindeanschluss	UKM
	Kolbenschieberventil, FTF1	FVL
KSB		
	Control valve BOA-Control SAR	HCM
	Shut-off valve BOA-Super-Compact	BSC
	Shut-off valve BOA-Compact, FTF14	FVK
	Shut-off valve BOA-Compact IMS, FTF14	FVK
	Shut-off valve BOA-W, FTF1	FVL
	Shut-off valve BOA-H, FTF1	FVL
	Diaphragm valve Sisto, FTF1	FVL
	Butterfly valve BOAX-S	FKL
	Strainer BOA-S	SVF
	Check valve BOA-R	SVF
	Check valve BOA-RVK	FKL
LANDIS & STAefa		
	3-way valve with flange connection	DWV
	2-way valve with flange connection	FVL
	3-way valve with threaded connection	DWM
	2-way valve with threaded connection	GVM
LUDEMANN		
	Strainer with flange connection	SVF
	Ball valve with threaded connection	UKM
OVENTROP		
	Line regulating valve Hydrocontrol	OMG
	Flange control valve	SVF
	Hydrocontrol	
	Balancing valve Hycocoon	HSG
	Differential pressure regulator Hydromat	auf Anfrage
	Ball valve with threaded connection	UKM
	Straight seat valve with threaded connection	GVM
	Angle seat valve with threaded connection	USV
	Butterfly valve center flange version	FKL
	Butterfly valve intermediate construction version	FKL
	Check valve with threaded connection	SFM
	Check valve with flange connection	SVF
	check valve	FKL
	Intermediate version Strainer with flange connection	SVF
	Strainer with threaded connection	SFM
	Aquastrom free-flow valves	OMG
	Aquastrom free-flow valves with flange	SVF
ROSSWEINER		
	Piston valve with threaded connection	GVM
	Circulation valve with threaded connection	SVK
SAUTER		
	Throttle intermediate construction version	FKL
	3-way valve with flange connection	DWV
	2-way valve with flange connection	FVL
	3-way valve with threaded connection	DWM
	2-way valve with threaded connection	GVM

SCHLÖSSEr		
	Free-flow valve with threaded connection	USV
	Non-return valve with threaded connection	SFM
SCHMIEDING Armaturen		
	Angle seat valve with threaded connection	USV
	Ball valve with threaded connection	UKM
	Piston spool with threaded connection	GVM
	Butterfly valve type ECLI	FKL
SCHUBERT+SalZER		
	Angle seat valve with threaded connection	USV
	3-way valve with threaded connection	DWM
	Angle seat check valve	SFM
	Strainer with threaded connection	SFM
SEPPELFRICKE		
	Angle seat valve with threaded connection	SVK
	Ball valve with threaded connection	UKM
	Straight seat valve with threaded connection	GVM
	Backflow preventer	SFM
	Circulation valve	SFM
SFERATEC		
	Ball valve with threaded connection	UKM
	Sleeve slide with threaded connection	GVM
	3-way valve with threaded connection	DWM
Samson		
	3-way valve with flange connection	DWV
	2-way valve with flange connection	FVL
	Butterfly valve intermediate construction version	FKL
TA HEIMEIER		
	Line regulating valve STAD / STAD-C / STAD-R	HCM
	Zone control valve TBV-C	SVK
	3-way valve with threaded connection	DWM
	2-way valve with threaded connection	GVM
	Shut-off valve STS	HCM
	Ball valve Globo H	KHM
	Pump ball valve Globo P + PS	PKH
TACONOVA		
	Balancing valves Sleeve version	SFM
	Balancing valves Flange design	SVF
	3-way valve with threaded connection	DWM
Viega		
	Angle seat valve with threaded connection	USV
	Circulation regulating valve	HSG
	Ball valve with threaded connection	UKM
Wiesa		
	Ball valve with threaded connection	UKM
	Muff gate valve	GVM
	Muff strainer	SFM
	Muff kickback door	SFM
	butterfly valve	FKL

For the definition of the drainage hole
of our Energy Box

Emptying left in the direction of flow

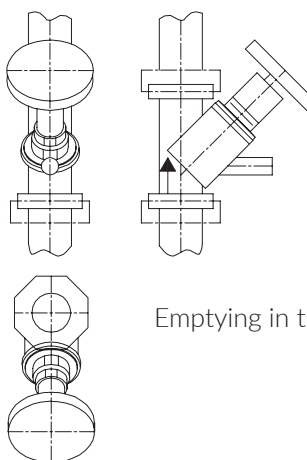
When emptying on the left, please tick here

☐

Emptying left

Emptying in the middle in the flow direction

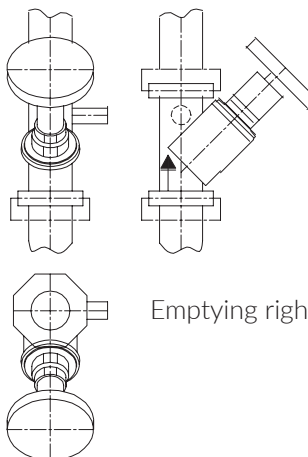
When emptying in the middle, please tick here

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Emptying in the middle

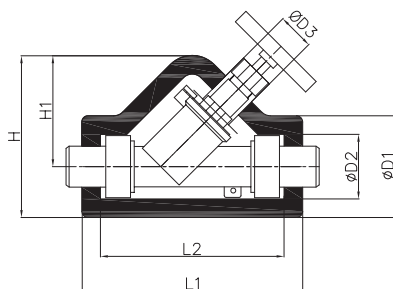
Emptying right in the direction of flow

When emptying right, please tick here

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Emptying right

The existing drain hole can be determined on site and tick here in this form and fax us.
Then we will choose the right insulation cap for you.



Valves	Makes / manufacturers
Free-flow valve alwa	MNG
Free flow angle seat valve	Kemper
Angle Seat Valve	Oventrop
Free-flow valve, angle seat valve	Seppelfricke

Specification text Aluminum SURFACE - Energy Box, Alu

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series SVM for valves with inclined spindle and check valves with socket connection. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
SVM-AL-010	10	3/8"	104	80	54	30	22	81	54	90	31,10
SVM-AL-015	15	1/2"	138	114	61	37	22	98	69	105	32,00
SVM-AL-020	20	3/4"	155	125	77	47	29	121	82	115	32,40
SVM-AL-025	25	1"	178	148	82	52	29	131	90	135	36,90
SVM-AL-032	32	1 1/4"	202	162	104	64	29	160	105	190	40,40
SVM-AL-040	40	1 1/2"	224	174	120	70	29	186	125	280	43,80
SVM-AL-050	50	2"	248	188	141	82	29	223	153	480	50,00

Dimension D3 is adjusted depending on the valve

Tender specification PS SURFACE - Energy Box, PS

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series SVM for valves with inclined spindle and check valves with socket connection. According to the EnEV, consisting of two PUR half-shells, which are covered with PS foil and fixed with straps.

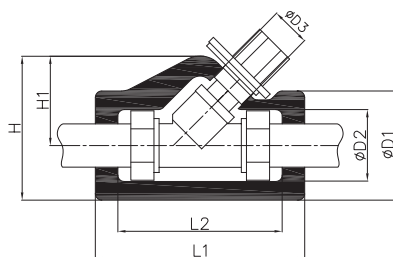
PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
SVM-PS-010	10	3/8"	104	80	54	30	22	81	54	90	24,60
SVM-PS-015	15	1/2"	138	114	61	37	22	98	69	105	25,10
SVM-PS-020	20	3/4"	155	125	77	47	29	121	82	115	26,30
SVM-PS-025	25	1"	178	148	82	52	29	131	90	135	29,70
SVM-PS-032	32	1 1/4"	202	162	104	64	29	160	105	190	32,40
SVM-PS-040	40	1 1/2"	224	174	120	70	29	186	125	280	36,50
SVM-PS-050	50	2"	248	188	141	82	29	223	153	480	41,00

Dimension D3 is adjusted depending on the valve

SERIE SVK



Valves	Makes / manufacturers
Angle seat valve Kombi II + III	MNG
Regulating valve	ABA Beul
Circulation regulating valve	Kemper
Circulation valve	Rosswainer
Angle Seat Valve	Seppelfricke

Specification text Aluminum SURFACE, ALU SVK

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series SVK for angle seat valve MNG Kombi II and Kombi III. In accordance with the EnEV, consisting of two PUR half-shells, which are coated with aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
SVK-AL-010	10	3/8"	120	96	57	33	32	77	47	85	*
SVK-AL-015	15	1/2"	130	104	62	38	32	91	58	105	*
SVK-AL-020	20	3/4"	139	113	71	45	32	104	67	115	*
SVK-AL-025	25	1"	163	128	85	56	32	112	69	120	*
SVK-AL-032	32	1 1/4"	184	147	99	59	40	137	86	135	*
SVK-AL-040	40	1 1/2"	200	160	109	69	40	146	88	155	*
SVK-AL-050	50	2"	240	190	140	90	40	187	113	230	*

Dimension D3 is adjusted depending on the valve

* Price upon request

Tender specification PS SURFACE, PS SVK

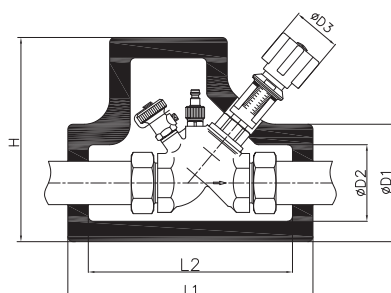
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series SVK for angle seat valve MNG Kombi II and Kombi III. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
SVK-PS-010	10	3/8"	120	96	57	33	32	77	47	85	24,60
SVK-PS-015	15	1/2"	130	104	62	38	32	91	58	105	25,10
SVK-PS-020	20	3/4"	139	113	71	45	32	104	67	115	26,30
SVK-PS-025	25	1"	163	128	85	56	32	112	69	120	29,70
SVK-PS-032	32	1 1/4"	184	147	99	59	40	137	86	135	32,40
SVK-PS-040	40	1 1/2"	200	160	109	69	40	146	88	155	36,50
SVK-PS-050	50	2"	240	190	140	90	40	187	113	230	41,00

Dimension D3 is adjusted depending on the valve



Valves	Makes / manufacturers
Balancing valve Hydrocontrol	Oventrop
Aquastrom Free-flow valve	Oventrop
Alu ALWA K + ALWA KFR	MNG

Specification text Aluminum SURFACE, Alu OMG

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series OMG for Oven-trop Hydrocontrol in sleeve design. In accordance with the EnEV, consisting of two PUR half-chalices encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm										
Art.-Nr.	DN	In-ches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
OMG-AL-010	10	3/8"	180	155	70	46	-	145	90	*
OMG-AL-015	15	1/2"	180	155	70	46	-	145	90	*
OMG-AL-020	20	3/4"	200	170	85	55	-	156	125	*
OMG-AL-025	25	1"	200	170	85	55	-	156	125	*
OMG-AL-032	32	1 1/4"	240	200	115	75	-	200	150	*
OMG-AL-040	40	1 1/2"	250	205	135	75	-	210	190	*
OMG-AL-050	50	2"	265	210	150	90	-	245	210	*
OMG-AL-065	65	2 1/2"	280	220	175	105	-	255	270	*

Dimension D3 is adjusted depending on the valve

* Price upon request

Tender specification PS SURFACE, PS OMG

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the OMG series for Oven-trop Hydrocontrol in sleeve design. According to the EnEV, consisting of two PUR half-shells, which are covered with PS foil and fixed with straps.

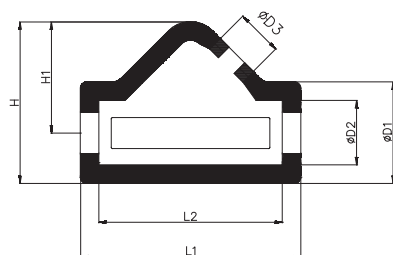
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	In-ches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
OMG-PS-010	10	3/8"	180	155	70	46	-	145	90	27,50
OMG-PS-015	15	1/2"	180	155	70	46	-	145	90	28,50
OMG-PS-020	20	3/4"	200	170	85	55	-	156	125	28,50
OMG-PS-025	25	1"	200	170	85	55	-	156	125	32,70
OMG-PS-032	32	1 1/4"	240	200	115	75	-	200	150	35,00
OMG-PS-040	40	1 1/2"	250	205	135	75	-	210	190	38,00
OMG-PS-050	50	2"	265	210	150	90	-	245	210	41,70
OMG-PS-065	65	2 1/2"	280	220	175	105	-	255	270	55,40

Dimension D3 is adjusted depending on the valve

SERIE USV



Valves	Makes / manufacturers
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All common angle seat valves

Tender specification PS SURFACE, PS USV

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series UPS for all common valves with angularly arranged spindle and drains with socket connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

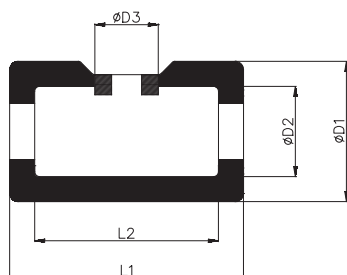
PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
USV-PS-010	10	3/8"	104	80	54	30	22	81	54	90	27,50
USV-PS-015	15	1/2"	138	114	61	37	22	98	69	105	28,50
USV-PS-020	20	3/4"	155	125	77	47	29	121	82	115	28,50
USV-PS-025	25	1"	178	148	82	52	29	131	90	135	28,50
USV-PS-032	32	1 1/4"	202	162	104	64	29	160	105	190	32,70
USV-PS-040	40	1 1/2"	224	174	120	70	29	186	125	280	38,00
USV-PS-050	50	2"	248	188	141	82	29	223	153	480	41,70

Dimension D3 is adjusted depending on the valve

SERIE UKM



Valves	Makes / manufacturers
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All common ball valves with socket connection

Tender specification PS SURFACE, PS UKM

Specification text Aluminum SURFACE - Energy Box, PS Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series UKM for all common ball valves with socket connection. According to the EnEV, consisting of two PUR half-shells, which are covered with PS foil and fixed with straps.

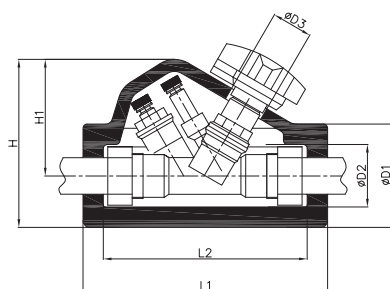
PS-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
UKM-PS-010	10	3/8"	101	77	54	30	29	50	24,60
UKM-PS-015	15	1/2"	121	97	62	38	29	65	25,10
UKM-PS-020	20	3/4"	139	109	74	44	29	90	26,30
UKM-PS-025	25	1"	155	125	85	55	29	115	29,70
UKM-PS-032	32	1 1/4"	209	169	106	66	29	135	32,40
UKM-PS-040	40	1 1/2"	185	135	125	75	35	125	36,50
UKM-PS-050	50	2"	220	160	156	96	35	290	41,00

Dimension D3 is adjusted depending on the valve

SERIE HCM



ALU-SURFACE



Valves	Makes / manufacturers
Line regulating valves STS, STAD, STAM, STAP	TA Heimeier
Threaded rope valves	Danfoss
Control valve BOA-Control SAR	KSB

Specification text Aluminum SURFACE, Alu HCM

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the HCM series for TA-ST regulating valves in sleeve design. In accordance with the EnEV, consisting of two PUR half-chalices encased in aluminum coarse grain sheet metal and fixed with straps.

Measurements in mm												
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	B	H	H1	Weight (g)	Price in EURO
HCM-AL-010	10	3/8"	180	150	76	46	29	116	124	85	90	*
HCM-AL-015	15	1/2"	180	150	76	46	29	116	124	85	90	*
HCM-AL-020	20	3/4"	180	150	76	46	29	116	124	85	90	*
HCM-AL-025	25	1"	200	170	84	54	29	126	136	94	125	*
HCM-AL-032	32	1 1/4"	230	190	99	59	29	135	153	103	150	*
HCM-AL-040	40	1 1/2"	250	205	122	72	29	143	179	118	190	*
HCM-AL-050	50	2"	291	241	125	95	29	166	178	116	210	*

Dimension D3 is adjusted depending on the valve

*Price upon request

PS-SURFACE

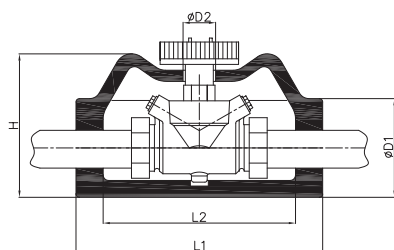


Tender specification PS SURFACE, PS HCM

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the HCM series for TA-ST regulating valves in sleeve design. According to the EnEV, consisting of two PUR half-shells, which are covered with PS foil and fixed with straps.

Measurements in mm												
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	B	H	H1	Weight (g)	Price in EURO
HCM-PS-010	10	3/8"	180	150	76	46	29	116	124	85	90	27,50
HCM-PS-015	15	1/2"	180	150	76	46	29	116	124	85	90	28,50
HCM-PS-020	20	3/4"	180	150	76	46	29	116	124	85	90	28,50
HCM-PS-025	25	1"	200	170	84	54	29	126	136	94	125	32,70
HCM-PS-032	32	1 1/4"	230	190	99	59	29	135	153	103	150	35,00
HCM-PS-040	40	1 1/2"	250	205	122	72	29	143	179	118	190	38,00
HCM-PS-050	50	2"	291	241	125	95	29	166	178	116	210	41,70

Dimension D3 is adjusted depending on the valve



Valves	Makes / manufacturers
Multi-Therm Circulation Valve	Kemper
Flow Control Valve Hycocan	Oventrop
Circulation Control Valve	Viega

Specification text Aluminum SURFACE, Alu HSG

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the HSG series for Kemper Multi-Therm. In accordance with the EnEV, consisting of two PUR half-shells encased with aluminum coarse grain sheet metal and fixed with straps.

ALU- SURFACE



Measurements in mm										
Art.-Nr.	DN	In-ches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
HSG-AL-010	10	3/8"	220	190	73	27	-	113	140	*
HSG-AL-015	15	1/2"	220	190	73	27	-	113	140	*
HSG-AL-020	20	3/4"	220	190	73	27	-	113	140	*
HSG-AL-025	25	1"	220	172	88	27	-	128	140	*
HSG-AL-032	32	1 1/4"	228	182	105	29	-	138	180	*
HSG-AL-040	40	1 1/2"	241	197	122	29	-	152	240	*
HSG-AL-050	50	2"	247	197	148	29	-	178	240	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, PS HSG

Energy Box, PS for insulation up to +130 degrees Celsius of the HSG series for Kemper Multi-Therm. In accordance with the EnEV consisting of two PUR half-shells, which are jacketed with PS foil and fixed with straps.

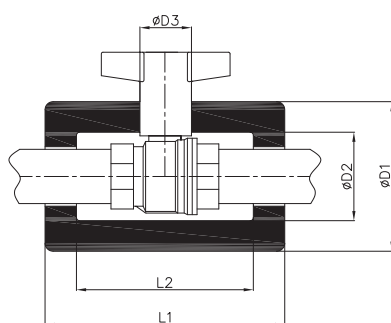
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	In-ches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
HSG-PS-010	10	3/8"	220	190	73	27	-	113	140	28,80
HSG-PS-015	15	1/2"	220	190	73	27	-	113	140	28,80
HSG-PS-020	20	3/4"	220	190	73	27	-	113	140	28,80
HSG-PS-025	25	1"	220	172	88	27	-	128	140	32,90
HSG-PS-032	32	1 1/4"	228	182	105	29	-	138	180	35,60
HSG-PS-040	40	1 1/2"	241	197	122	29	-	152	240	40,10
HSG-PS-050	50	2"	247	197	148	29	-	178	240	44,60

Dimension D3 is adjusted depending on the valve

SERIE KHM



Valves	Makes / manufacturers
Ball valve, Globo H	Heimeier
Ball valve, Optibal	Oventrop

Specification text Aluminum surface, Alu KHM

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series KHM for heating ball valves with socket connection. In accordance with the EnEV, consisting of two PUR half-shells, which are coated with aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
KHM-AL-010	10	3/8"	101	77	54	30	29	50	*
KHM-AL-015	15	1/2"	121	97	62	38	29	65	*
KHM-AL-020	20	3/4"	139	109	74	44	29	90	*
KHM-AL-025	25	1"	155	125	85	55	29	115	*
KHM-AL-032	32	1 1/4"	209	169	106	66	29	135	*
KHM-AL-040	40	1 1/2"	185	135	125	75	35	125	*
KHM-AL-050	50	2"	220	160	156	96	35	290	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, PS KHM

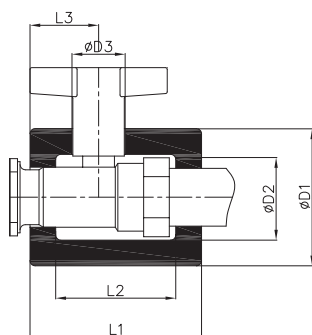
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series KHM for heating ball valves with socket connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
KHM-PS-010	10	3/8"	101	77	54	30	29	50	17,40
KHM-PS-015	15	1/2"	121	97	62	38	29	65	17,90
KHM-PS-020	20	3/4"	139	109	74	44	29	90	18,80
KHM-PS-025	25	1"	155	125	85	55	29	115	21,20
KHM-PS-032	32	1 1/4"	209	169	106	66	29	135	25,50
KHM-PS-040	40	1 1/2"	185	135	125	75	35	125	30,60
KHM-PS-050	50	2"	220	160	156	96	35	290	36,80

Dimension D3 is adjusted depending on the valve



Valves	Makes / manufacturers
Pump ball valve Globo-P	Heimeier
Pump ball valve	Oventrop

Specification text Aluminum surface, Alu PKH

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of series PKH for pump-ball valves. In accordance with the EnEV, consisting of two PUR half-shells encased with aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	L3	D1	D2	D3	Weight (g)	Price in EURO
PKH-AL-025	25/25	1 x 1"	100	70	37	80	50	29	70	*
PKH-AL-031	32/25	1 ¼ x 1"	110	80	45	102	62	29	75	*
PKH-AL-032	32/32	1 ¼ x 1 ¼"	110	80	45	102	62	29	75	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, PS PKH

Energy Box, PS for insulation in the range up to +130 degrees Celsius of series PKH for pump-ball valves. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

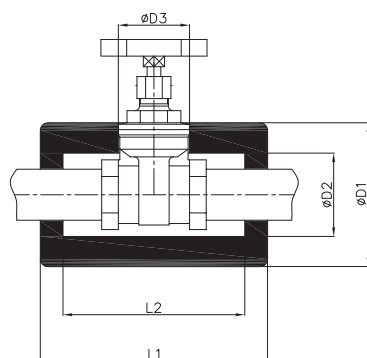
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	L3	D1	D2	D3	Weight (g)	Price in EURO
PKH-PS-025	25/25	1 x 1"	100	70	37	80	50	29	70	18,80
PKH-PS-031	32/25	1 ¼ x 1"	110	80	45	102	62	29	75	21,20
PKH-PS-032	32/32	1 ¼ x 1 ¼"	110	80	45	102	62	29	75	25,40

Dimension D3 is adjusted depending on the valve

SERIE GVM



ALU-SURFACE



Valves	Makes / manufacturers
Piston valves with thread	ABA Beul
Straight seat valves & piston valves with thread	Bender
two-way control valve	Danfoss
Gate valve	Duramar

and all manufacturers to DIN length

Specification text Aluminum surface, Alu GVM

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the GVM series for gate valves, straight seat valves and non-return caps with socket connection. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
GVM-AL-010	10	3/8"	99	75	64	34	-	75	*
GVM-AL-015	15	1/2"	99	75	64	34	-	80	*
GVM-AL-020	20	3/4"	111	81	71	41	-	115	*
GVM-AL-025	25	1"	150	120	95	55	-	120	*
GVM-AL-032	32	1 1/4"	165	125	100	60	-	135	*
GVM-AL-040	40	1 1/2"	180	130	115	65	-	160	*
GVM-AL-050	50	2"	215	155	150	90	-	300	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, PS GVM

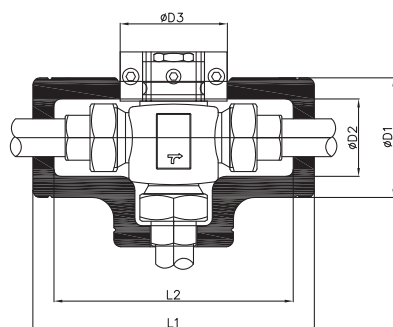
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series GVM series for gate valves, straight seat valves and check caps with socket connection. According to the EnEV, consisting of two PUR half-shells, which are covered with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
GVM-PS-010	10	3/8"	101	77	54	30	-	50	24,60
GVM-PS-015	15	1/2"	121	97	62	38	-	65	25,10
GVM-PS-020	20	3/4"	139	109	74	44	-	90	26,30
GVM-PS-025	25	1"	155	125	85	55	-	115	29,70
GVM-PS-032	32	1 1/4"	209	169	106	66	-	135	32,40
GVM-PS-040	40	1 1/2"	185	135	125	75	-	125	36,50
GVM-PS-050	50	2"	220	160	156	96	-	290	41,00

Dimension D3 is adjusted depending on the valve



Valves

Makes / manufacturers

For all common three-way valves with threaded connection

Specification text Aluminum surface, DWM

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series DWM for three-way valves with socket connection. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
DWM-AL-010	10	3/8"	101	77	54	30	29	50	35,60
DWM-AL-015	15	1/2"	121	97	62	38	29	65	35,90
DWM-AL-020	20	3/4"	139	109	74	44	29	90	36,30
DWM-AL-025	25	1"	155	125	85	55	29	115	40,40
DWM-AL-032	32	1 1/4"	209	169	106	66	29	135	44,00
DWM-AL-040	40	1 1/2"	185	135	125	75	35	125	46,20
DWM-AL-050	50	2"	220	160	156	96	35	290	53,10

Dimension D3 is adjusted depending on the valve

Tender specification PS surface, DWM

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series DWM for three-way valves with socket connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

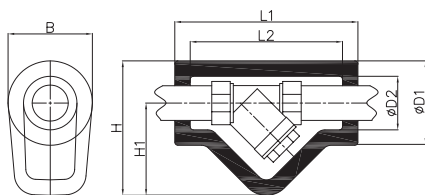
PS-SURFACE



Measurements in mm									
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	Weight (g)	Price in EURO
DWM-PS-010	10	3/8"	101	77	54	30	29	50	28,80
DWM-PS-015	15	1/2"	121	97	62	38	29	65	28,80
DWM-PS-020	20	3/4"	139	109	74	44	29	90	28,80
DWM-PS-025	25	1"	155	125	85	55	29	115	32,90
DWM-PS-032	32	1 1/4"	209	169	106	66	29	135	35,60
DWM-PS-040	40	1 1/2"	185	135	125	75	35	125	40,10
DWM-PS-050	50	2"	220	160	156	96	35	290	44,60

Dimension D3 is adjusted depending on the valve

SERIE SFM



Valves

Makes / manufacturers

For all common strainers with threaded connection

Specification text Aluminum surface, SFM

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series SFM for mudguard in sleeve design. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	B	H	H1	Weight (g)	Price in EURO
SFM-AL-010	10	3/8"	104	80	54	30	54	81	54	95	*
SFM-AL-015	15	1/2"	138	114	61	37	61	98	69	105	*
SFM-AL-020	20	3/4"	155	125	77	47	77	121	82	160	*
SFM-AL-025	25	1"	178	148	82	52	82	131	90	220	*
SFM-AL-032	32	1 1/4"	202	162	104	64	104	160	105	250	*
SFM-AL-040	40	1 1/2"	224	174	120	70	120	186	125	300	*
SFM-AL-050	50	2"	248	188	141	82	141	223	153	500	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, PS SFM

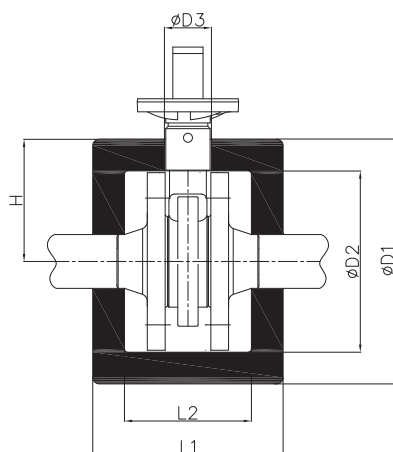
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series SFM for dirt trap in sleeve design. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	B	H	H1	Weight (g)	Price in EURO
SFM-PS-010	10	3/8"	104	80	54	30	54	81	54	95	24,60
SFM-PS-015	15	1/2"	138	114	61	37	61	98	69	105	25,10
SFM-PS-020	20	3/4"	155	125	77	47	77	121	82	160	26,30
SFM-PS-025	25	1"	178	148	82	52	82	131	90	220	29,70
SFM-PS-032	32	1 1/4"	202	162	104	64	104	160	105	250	32,40
SFM-PS-040	40	1 1/2"	224	174	120	70	120	186	125	300	36,50
SFM-PS-050	50	2"	248	188	141	82	141	223	153	500	41,00

Dimension D3 is adjusted depending on the valve



ALU-SURFACE



Valves	Makes / manufacturers
BOA Super Compact	KSB

Specification text Aluminum surface, BSC

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series BSC for KSB - BOA Super Compact. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
BSC-AL-015	15	½"	140	100	156	116	35	78	205	*
BSC-AL-020	20	¾"	140	100	156	116	35	78	205	*
BSC-AL-025	25	1"	140	100	163	123	35	82	215	*
BSC-AL-032	32	1 ¼"	165	115	193	143	35	97	410	*
BSC-AL-040	40	1 ½"	175	125	208	158	35	104	420	*
BSC-AL-050	50	2"	195	145	224	174	46	112	570	*
BSC-AL-065	65	2 ½"	220	160	254	194	48	127	590	*
BSC-AL-080	80	3"	265	185	292	212	54	146	830	*
BSC-AL-100	100	4"	300	210	317	227	64	159	870	*
BSC-AL-125	125	5"	340	240	355	255	83	178	980	*
BSC-AL-150	150	6"	365	265	395	295	83	198	1150	*

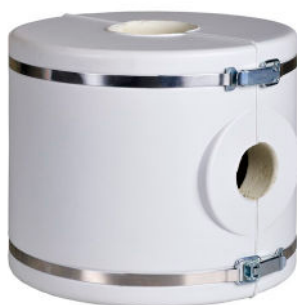
Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, BSC

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series BSC for KSB - BOA Super Compact. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

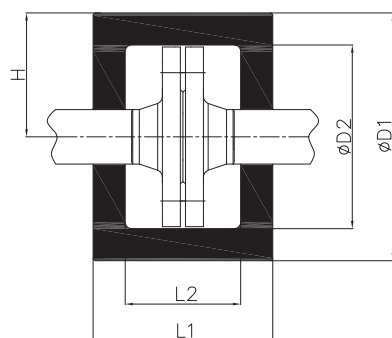
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
BSC-PS-015	15	½"	140	100	156	116	35	78	205	53,00
BSC-PS-020	20	¾"	140	100	156	116	35	78	205	55,10
BSC-PS-025	25	1"	140	100	163	123	35	82	215	56,60
BSC-PS-032	32	1 ¼"	165	115	193	143	35	97	410	66,90
BSC-PS-040	40	1 ½"	175	125	208	158	35	104	420	73,50
BSC-PS-050	50	2"	195	145	224	174	46	112	570	82,10
BSC-PS-065	65	2 ½"	220	160	254	194	48	127	590	96,30
BSC-PS-080	80	3"	265	185	292	212	54	146	830	112,10
BSC-PS-100	100	4"	300	210	317	227	64	159	870	128,10
BSC-PS-125	125	5"	340	240	355	255	83	178	980	145,50
BSC-PS-150	150	6"	365	265	395	295	83	198	1150	159,30

Dimension D3 is adjusted depending on the valve

SERIE FPA



Valves	Makes / manufacturers
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Flanges couples
Blind flanges

Specification text Aluminum surface, FPA

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the FPA series for flank pairs and blind flanges. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm										
Art.-Nr.	VVS nr.	DN	Inches	L1	L2	D1	D2	H	Weight (g)	Price in EURO
FPA-AL-015	499261004	15	½"	123	83	156	116	78	190	*
FPA-AL-020	499261006	20	¾"	123	83	156	116	78	190	*
FPA-AL-025	499261008	25	1"	123	83	163	123	81,5	200	*
FPA-AL-032	499261010	32	1 ¼"	140	90	193	143	96,5	380	*
FPA-AL-040	499261011	40	1 ½"	144	94	208	158	104	395	*
FPA-AL-050	499261012	50	2"	150	100	224	174	112	405	*
FPA-AL-065	499261013	65	2 ½"	160	100	254	194	127	455	*
FPA-AL-080	499261014	80	3"	190	110	292	212	146	750	*
FPA-AL-100	499261016	100	4"	204	114	317	227	158	805	*
FPA-AL-125	499261017	125	5"	210	110	355	255	177	900	*
FPA-AL-150	499261018	150	6"	215	115	395	295	197	1000	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, FPA

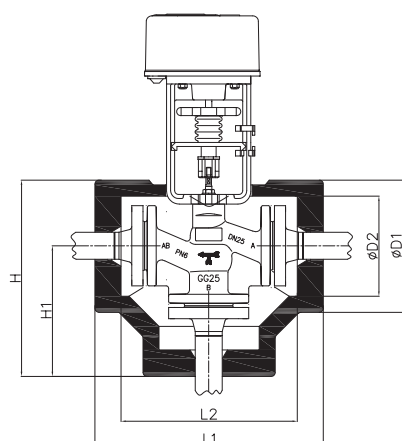
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the FPA series for flank pairs and blind flanges. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm										
Art.-Nr.	VVS nr.	DN	Inches	L1	L2	D1	D2	H	Weight (g)	Price in EURO
FPA-PS-015	499261104	15	½"	123	83	156	116	78	190	40,20
FPA-PS-020	499261106	20	¾"	123	83	156	116	78	190	40,40
FPA-PS-025	499261108	25	1"	123	83	163	123	81,5	200	41,00
FPA-PS-032	499261110	32	1 ¼"	140	90	193	143	96,5	380	42,80
FPA-PS-040	499261111	40	1 ½"	144	94	208	158	104	395	47,00
FPA-PS-050	499261112	50	2"	150	100	224	174	112	405	51,30
FPA-PS-065	499261113	65	2 ½"	160	100	254	194	127	455	63,50
FPA-PS-080	499261114	80	3"	190	110	292	212	146	750	72,60
FPA-PS-100	499261116	100	4"	204	114	317	227	158	805	80,30
FPA-PS-125	499261117	125	5"	210	110	355	255	177	900	90,00
FPA-PS-150	499261118	150	6"	215	115	395	295	197	1000	101,30

Dimension D3 is adjusted depending on the valve



ALU-SURFACE



Valves	Makes / manufacturers
Three-way flange control valve	Danfoss
Three-way mixer with flange connection	Honeywell
Three-way valve with flange connection	Honeywell
Three-way valve with flange connection	Kieback + Peter
Three-way valve with flange connection	Landis & Staefa

Specification text Aluminum surface, DWV

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series DWV for three-way valves with flange connection. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	H	H1	Weight (g)	Price in EURO
DWV-AL-015	15	½"	275	235	150	110	210	135	660	56,40
DWV-AL-020	20	¾"	275	235	150	110	210	135	660	58,50
DWV-AL-025	25	1"	280	240	160	120	225	145	690	61,20
DWV-AL-032	32	1 ¼"	330	280	195	145	277	180	780	69,30
DWV-AL-040	40	1 ½"	345	295	205	155	282	180	790	73,40
DWV-AL-050	50	2"	390	330	232	172	306	190	1050	82,40
DWV-AL-065	65	2 ½"	475	405	272	192	351	215	1590	102,30
DWV-AL-080	80	3"	495	415	300	210	385	235	2902	122,40
DWV-AL-100	100	4"	550	470	327	227	408	245	2810	151,50
DWV-AL-125	125	5"	615	525	360	260	485	285	3210	182,60
DWV-AL-150	150	6"	695	595	390	290	515	320	3610	210,20

Dimension D3 is adjusted depending on the valve

Tender specification PS surface, DWV

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series DWV for three-way valves with flange connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

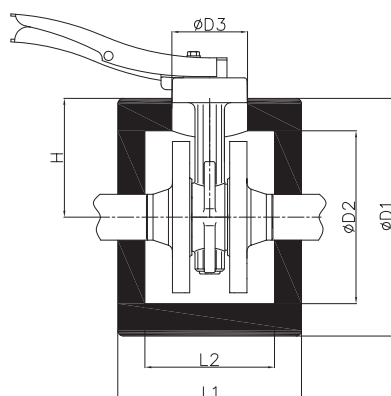
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	H	H1	Weight (g)	Price in EURO
DWV-PS-015	15	½"	275	235	150	110	210	135	660	86,00
DWV-PS-020	20	¾"	275	235	150	110	210	135	660	87,80
DWV-PS-025	25	1"	280	240	160	120	225	145	690	93,30
DWV-PS-032	32	1 ¼"	330	280	195	145	277	180	780	106,10
DWV-PS-040	40	1 ½"	345	295	205	155	282	180	790	120,50
DWV-PS-050	50	2"	390	330	232	172	306	190	1050	141,90
DWV-PS-065	65	2 ½"	475	405	272	192	351	215	1590	169,40
DWV-PS-080	80	3"	495	415	300	210	385	235	2902	207,00
DWV-PS-100	100	4"	550	470	327	227	408	245	2810	262,10
DWV-PS-125	125	5"	615	525	360	260	485	285	3210	306,20
DWV-PS-150	150	6"	695	595	390	290	515	320	3610	325,20

Dimension D3 is adjusted depending on the valve

SERIE FKL



ALU-SURFACE



Valves	Makes / manufacturers
Shut-off flap ZESA / GESA	Ari
Shut-off flap Z011	Ebro
Butterfly valves	GEFA
DISCO check valve	Gestra
Shut-off valve Boax-S	KSB

Specification text Aluminum surface, FKL

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series FKL for shut-off valves, flap check valves and compensators. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with clamping straps.

Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
FKL-AL-015	15	½"	140	100	156	116	38	78	205	50,00
FKL-AL-020	20	¾"	140	100	156	116	38	78	205	51,80
FKL-AL-025	25	1"	140	100	163	123	38	81,5	215	55,50
FKL-AL-032	32	1 ¼"	150	100	193	143	38	96,5	410	59,60
FKL-AL-040	40	1 ½"	150	100	208	158	38	104	415	62,90
FKL-AL-050	50	2"	160	110	224	174	38	112	550	67,10
FKL-AL-065	65	2 ½"	179	119	254	194	41	127	570	74,60
FKL-AL-080	80	3"	215	135	292	212	51	146	810	90,60
FKL-AL-100	100	4"	230	140	317	227	51	158	835	107,40
FKL-AL-125	125	5"	260	160	355	225	92	177,5	940	122,90
FKL-AL-150	150	6"	260	160	395	295	92	197,5	1090	130,20

Dimension D3 is adjusted depending on the valve

Tender specification PS surface, FKL

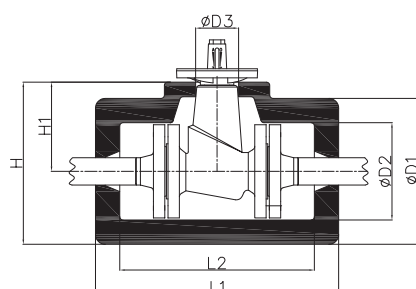
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series FKL for shut-off valves, flap check valves and compensators. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	Weight (g)	Price in EURO
FKL-PS-015	15	½"	140	100	156	116	38	78	205	41,00
FKL-PS-020	20	¾"	140	100	156	116	38	78	205	41,70
FKL-PS-025	25	1"	140	100	163	123	38	81,5	215	47,00
FKL-PS-032	32	1 ¼"	150	100	193	143	38	96,5	410	53,00
FKL-PS-040	40	1 ½"	150	100	208	158	38	104	415	63,00
FKL-PS-050	50	2"	160	110	224	174	38	112	550	68,60
FKL-PS-065	65	2 ½"	179	119	254	194	41	127	570	77,10
FKL-PS-080	80	3"	215	135	292	212	51	146	810	89,60
FKL-PS-100	100	4"	230	140	317	227	51	158	835	99,20
FKL-PS-125	125	5"	260	160	355	225	92	177,5	940	119,40
FKL-PS-150	150	6"	260	160	395	295	92	197,5	1090	144,50

Dimension D3 is adjusted depending on the valve



Valves	Makes / manufacturers
Shut-off valve Euro Wedi FTF 14	ARI
Wedge gate valve, FTF 14	Fromme
Shut-off valve BOA-Compact	KSB
Shut-off valve BOA-Compact IMS	KSB

Specification text Aluminum surface, FVK

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series FVK for short ball, diaphragm, straight seat valves and flanges according to DIN length, F4. According to the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
FVK-AL-015	15	½"	230	190	140	100		170	100	450	*
FVK-AL-020	20	¾"	240	200	150	110		180	105	620	*
FVK-AL-025	25	1"	245	205	160	120		185	105	1010	*
FVK-AL-032	32	1 ¼"	260	210	195	145		220	123	1150	*
FVK-AL-040	40	1 ½"	280	230	205	155		248	145	1200	*
FVK-AL-050	50	2"	300	240	232	172		266	150	1250	*
FVK-AL-065	65	2 ½"	335	265	272	192		321	185	1310	*
FVK-AL-080	80	3"	355	275	300	210		350	200	1410	*
FVK-AL-100	100	4"	375	295	327	227		374	210	1490	*
FVK-AL-125	125	5"	405	315	359	260		435	255	1640	*
FVK-AL-150	150	6"	435	335	390	290		495	300	1730	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Tender specification PS surface, FVK

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the FVK series for short ball, diaphragm, straight seat valves and flanges according to DIN length, F4. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

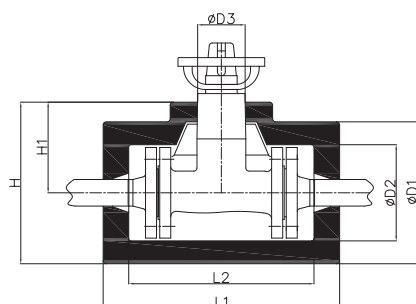
PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
FVK-PS-015	15	½"	230	190	140	100		170	100	450	52,70
FVK-PS-020	20	¾"	240	200	150	110		180	105	620	53,00
FVK-PS-025	25	1"	245	205	160	120		185	105	1010	55,70
FVK-PS-032	32	1 ¼"	260	210	195	145		220	123	1150	63,60
FVK-PS-040	40	1 ½"	280	230	205	155		248	145	1200	72,00
FVK-PS-050	50	2"	300	240	232	172		266	150	1250	80,70
FVK-PS-065	65	2 ½"	335	265	272	192		321	185	1310	93,00
FVK-PS-080	80	3"	355	275	300	210		350	200	1410	110,30
FVK-PS-100	100	4"	375	295	327	227		374	210	1490	127,50
FVK-PS-125	125	5"	405	315	359	260		435	255	1640	144,80
FVK-PS-150	150	6"	435	335	390	290		495	300	1730	164,90

Dimension D3 is adjusted depending on the valve

SERIE FVL



Valves	Makes / manufacturers
Shut-off valve Euro Wedi, FABIA-Plus, Astra in length FTF 1	ARI
Flow Valve, FTF 1	FROMME
Shut-off valve GAV	Gestra
Line regulating and shut-off valve Kombi-F	Honeywell
Shut-off valve Boa-H, Boa-W, Sisto	KSB

Specification text Aluminum surface, FVL

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the series FVL for long ball, diaphragm, straight seat valves and flanges according to DIN length, F1. According to the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
FVL-AL-015	15	½"	245	205	140	100	38	170	100	470	*
FVL-AL-020	20	¾"	275	235	150	110	38	180	105	640	*
FVL-AL-025	25	1"	280	240	160	120	38	185	105	1040	*
FVL-AL-032	32	1 ¼"	330	280	195	145	38	220	123	1170	*
FVL-AL-040	40	1 ½"	345	295	205	155	38	240	138	1270	*
FVL-AL-050	50	2"	390	330	232	172	38	261	145	1290	*
FVL-AL-065	65	2 ½"	475	405	272	192	38	306	170	1370	*
FVL-AL-080	80	3"	495	415	300	210	43	350	200	1510	*
FVL-AL-100	100	4"	550	470	327	227	43	374	210	1690	*
FVL-AL-125	125	5"	675	525	359	260	43	435	255	1730	*
FVL-AL-150	150	6"	695	595	390	290	51	495	300	1805	*

Dimension D3 is adjusted depending on the valve

*Price upon request

Energy Box, PS FVL

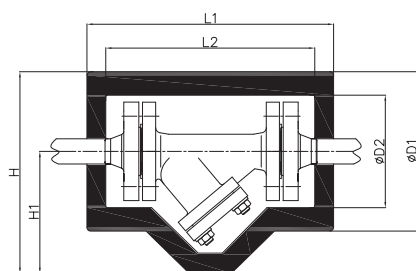
Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series FVL for long ball, diaphragm, straight seat valves and flanges according to DIN length, F1. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

PS-SURFACE



Measurements in mm											
Art.-Nr.	DN	Inches	L1	L2	D1	D2	D3	H	H1	Weight (g)	Price in EURO
FVL-PS-015	15	½"	245	205	140	100	38	170	100	470	56,60
FVL-PS-020	20	¾"	275	235	150	110	38	180	105	640	58,10
FVL-PS-025	25	1"	280	240	160	120	38	185	105	1040	62,60
FVL-PS-032	32	1 ¼"	330	280	195	145	38	220	123	1170	72,30
FVL-PS-040	40	1 ½"	345	295	205	155	38	240	138	1270	82,40
FVL-PS-050	50	2"	390	330	232	172	38	261	145	1290	98,62
FVL-PS-065	65	2 ½"	475	405	272	192	38	306	170	1370	119,90
FVL-PS-080	80	3"	495	415	300	210	43	350	200	1510	147,20
FVL-PS-100	100	4"	550	470	327	227	43	374	210	1690	188,40
FVL-PS-125	125	5"	675	525	359	260	43	435	255	1730	212,40
FVL-PS-150	150	6"	695	595	390	290	51	495	300	1805	256,10

Dimension D3 is adjusted depending on the valve



Valves	Makes / manufacturers
Strainer with flange connection	ARI
Strainer with flange connection	Danfoss
Strainer FTF1	Fromme
Angle seat valve with flange connection	Kemper
Strainer BOA-S	KSB
Check valve BOA-R	KSB

Specification text Aluminum surface, SVF

Energy Box, aluminum for insulation in the range up to +130 degrees Celsius of the SVF series for dirt collectors, angle seat and free-flow valves with flange connection. In accordance with the EnEV, consisting of two PUR half-shells encased in aluminum coarse grain sheet metal and fixed with straps.

ALU-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	H	H1	Weight (g)	Price in EURO
SVF-AL-015	15	½"	245	205	140	100	195	125	470	52,50
SVF-AL-020	20	¾"	275	235	150	110	208	133	640	56,70
SVF-AL-025	25	1"	280	240	160	120	236	156	1040	59,00
SVF-AL-032	32	1 ¼"	330	280	195	145	262	164,5	1170	67,20
SVF-AL-040	40	1 ½"	345	295	205	155	298	195,5	1270	71,00
SVF-AL-050	50	2"	390	330	232	172	328	212	1290	79,10
SVF-AL-065	65	2 ½"	475	405	272	192	412	276	1370	96,80
SVF-AL-080	80	3"	495	415	300	210	465	315	1510	115,50
SVF-AL-100	100	4"	550	470	327	227	493	329,5	1690	141,60
SVF-AL-125	125	5"	615	525	359	260	560	380,5	1730	166,40
SVF-AL-150	150	6"	695	595	390	290	620	425	1805	190,80

Dimension D3 is adjusted depending on the valve

Tender specification PS surface, SVF

Energy Box, PS for insulation in the range up to +130 degrees Celsius of the series SVF for dirt collectors, angle seat and free-flow valves with flange connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

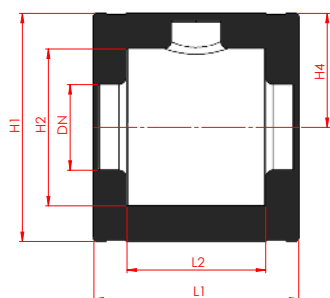
PS-SURFACE



Measurements in mm										
Art.-Nr.	DN	Inches	L1	L2	D1	D2	H	H1	Weight (g)	Price in EURO
SVF-PS-015	15	½"	245	205	140	100	195	125	470	56,60
SVF-PS-020	20	¾"	275	235	150	110	208	133	640	58,10
SVF-PS-025	25	1"	280	240	160	120	236	156	1040	62,60
SVF-PS-032	32	1 ¼"	330	280	195	145	262	164,5	1170	72,30
SVF-PS-040	40	1 ½"	345	295	205	155	298	195,5	1270	82,40
SVF-PS-050	50	2"	390	330	232	172	328	212	1290	98,60
SVF-PS-065	65	2 ½"	475	405	272	192	412	276	1370	119,90
SVF-PS-080	80	3"	495	415	300	210	465	315	1510	147,20
SVF-PS-100	100	4"	550	470	327	227	493	329,5	1690	188,40
SVF-PS-125	125	5"	615	525	359	260	560	380,5	1730	212,40
SVF-PS-150	150	6"	695	595	390	290	620	425	1805	256,10

Dimension D3 is adjusted depending on the valve

SERIE DHS AK



Valves

With flange connection
For mostly butterfly valves
KSB BOA SuperCompact valves

Makes / manufacturers

COMAP

Specification text, DHS AK

DHS Energy Box without PS surface for insulation in the range up to +130 degrees Celsius of the DHS AK series for district heating valves. The cap consists of two polyurethane half-shells, which are mounted with galvanized clamps. In order to prevent water vapor diffusion, we recommend the use of a sealing paste in the temperature range of -8 °C to +12 °C.

Measurements in mm

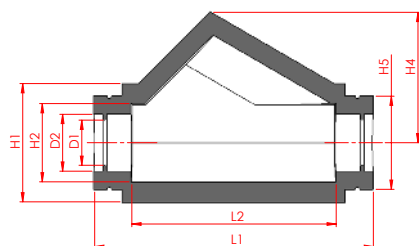
Art.-Nr.	Type	L1	L2	H1	H2	H4	Price in EURO
1602801	DN25	170	128	158	115	78	25,80
1602802	DN32	180	140	180	142	90	29,60
1602803	DN40	185	142	195	152	97	33,80
1602804	DN50	208	167	208	165	105	40,70
1602805	DN65	220	165	250	190	125	49,00
1602806	DN80	260	180	282	204	142	60,20
1602807	DN100	290	195	325	225	162	77,30

SERIE DHS MS

Valves

For angle seat valves with thread and socket connection

Makes / manufacturers



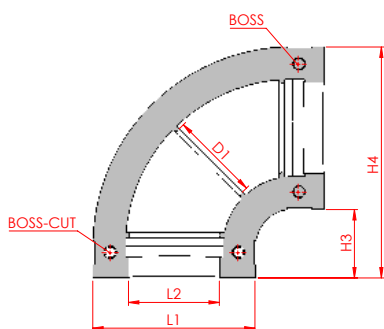
Specification text, DHS MS

DHS Energy Box without PS surface for insulation in the range up to +130 °Celsius of the series DHS MS for district heating valves. The cap is used on tilted flanged, lift and punch valves as well as on mud flaps. The cap consists of two half shells made of polyurethane, which can be easily assembled with retaining rings. To prevent water vapor diffusion, a sealing paste must be used in the temperature range -8 °C to +12 °C.

Measurements in mm

Art.-Nr.	Type	L1	L2	H1	H2	H4	H5	D1	D2	Price in EURO
1602701	DN25/32	210	150	83	54	92	67	34	43	13,70
1602702	DN40/50	300	220	127	84	140	100	48,5	61	16,70
1602703	DN65/80	355	258	185	121	198	148	78	90	22,40

SERIE DHS B



Valves

Makes / manufacturers

Pipe elbow pieces 50%

Specification text, DHS B

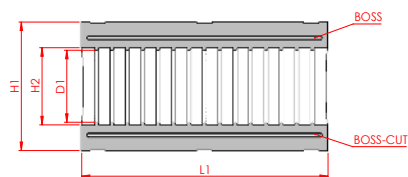
DHS Energy Box without PS surface for insulation in the range up to +130 degrees Celsius of the series DHS B for district heating valves. The cap consists of two pipe half-shells made of polyurethane, which can be fastened with Velcro or clips. The cap can be easily removed if necessary and then fastened again.



Measurements in mm

Art.-Nr.	Type	L1	L2	H3	H4	Price in EURO
1603101	DN15/25	50	28	25	75	8,50
1603102	DN25/32	67	43	34	100	9,70
1603103	DN40/50	100	62	42	142	12,70
1603104	DN65/80	147	92	77	224	23,20
1603105	DN100	205	115	90	295	35,90
1603106	DN125	250	142	100	350	42,30

SERIE DHS R



Valves

Makes / manufacturers

Pipe pieces 50%

Specification text, DHS R

Energy box without PS surface for insulation in the range up to + 130 ° Celsius of the series DHS R for district heating valves. Length 500 mm. The cap consists of two pipe half-shells made of polyurethane, which are easily sealed and assembled with stainless steel retaining rings. The cap can be easily removed if necessary and then fastened again. To prevent water vapor diffusion, a sealing paste must be used in the temperature range -8 ° C to + 12 ° C.



Measurements in mm

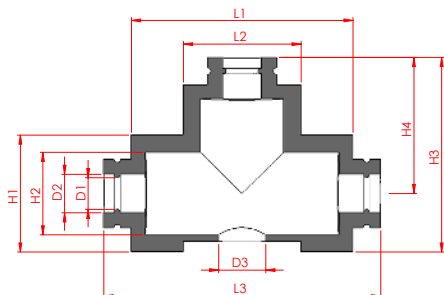
Art.-Nr.	Type	L1	H1	H2	D1	Price in EURO
1603001	DN15/20	500	50	28	22	12,70
1603002	DN25/32	500	67	43	33	15,50
1603003	DN40/50	500	100	60	48	32,60
1603004	DN65/80	500	150	90	76	37,50
1603005	DN100	500	204	124	115	47,90
1603006	DN125	500	250	150	140	67,90

SERIE DHS DM

Valves

Makes / manufacturers

For three-way valves with thread and socket connection



Specification text, DHS DM

Insulation jacket consisting of two half-shells with a spring and groove on the adjoining surfaces, which prevent slipping and are held together with electro-galvanized spring rings or bands. To prevent water vapor diffusion, sealing paste must be used at temperatures from -8°C to +12°C.



Measurements in mm

Art.-Nr.	Type	L1	L2	L3	H1	H2	H3	H4	D1	D2	D3	Price in EURO
1603401	DN15/20	160	85	200	85	60	145	102	23	28	*	15,50
1603402	DN25/32	190	117	230	112	84	170	110	36	44	*	20,60
1603403	DN40/50	220	135	279	130	100	200	135	51	61	*	20,60

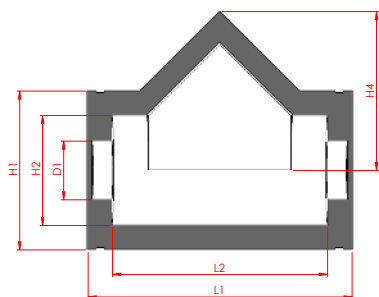
* Intended for carving

ENERGY BOX DHS F

Valves

Makes / manufacturers

For free flow valves with flanges



Specification text, DHS F

DHS Energy Box without PS surface for insulation in the range up to + 130 ° Celsius for district heating valves. The cap consists of two polyurethane half-shells, which are mounted with galvanized clamps. In order to prevent water vapor diffusion, we recommend the use of a sealing paste in the temperature range of -8 ° C to + 12 ° C.

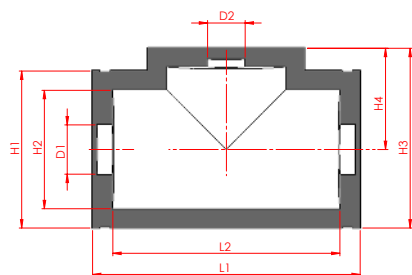


Measurements in mm

Art.-Nr.	Type	L1	L2	H1	H2	H4	D1	Price in EURO
1602901	DN20	270	240	147	102	135	*	23,80
1602902	DN25	258	218	158	116	148	*	25,80
1602903	DN32	290	250	182	142	155	*	29,60
1602904	DN40	310	270	192	152	185	*	33,90
1602905	DN50	365	315	205	167	220	*	40,50
1602906	DN65	420	355	246	187	248	*	48,80
1602907	DN80	467	389	285	202	272	*	60,20
1602908	DN100	540	440	325	225	325	*	76,80
1602909	DN125	585	485	353	270	367	*	97,30

* Intended for carving

SERIE DHS FL



Valves

Makes / manufacturers

For flange connection

Specification text, DHS FL

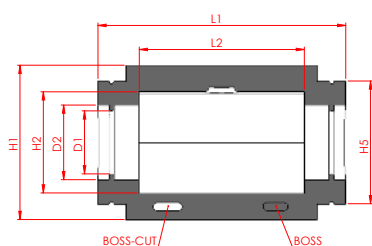
Energy box without PS surface for insulation in the range up to + 130 ° Celsius of the series DHS FL for district heating valves. The cap consists of two polyurethane half-shells, which are mounted with galvanized clamps. In order to prevent water vapor diffusion, we recommend the use of a sealing paste in the temperature range of -8 ° C to + 12 ° C.

Measurements in mm

Art.-Nr.	Type	L1	L2	H1	H2	H3	H4	D1	D2	Pris i DKK
1603201	DN20	255	220	137	105	152	83	*	*	35,50
1603202	DN25	262	220	161	120	180	100	*	*	38,50
1603203	DN32	290	250	182	142	203	111	*	*	43,90
1603204	DN40	312	272	193	152	225	127	*	*	50,80
1603205	DN50	370	320	205	165	243	138	*	*	60,60
1603206	DN65	423	355	248	187	284	160	*	*	72,90
1603207	DN100	540	440	327	225	375	207	*	*	109,80

* Intended for carving

SERIE DHS KH



Valves

Makes / manufacturers

For valves with threaded or socket connection

Specification text, DHS KH

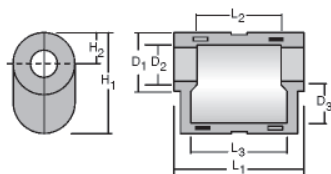
Energy Box without PS surface for insulation in the range up to + 130 ° Celsius of the series DHS KH for district heating valves.

The cap consists of two half shells with tongue and groove on the abutting surfaces that prevent slipping. They are fastened with electrogalvanized galvanized spring rings or clamps. In order to prevent water vapor diffusion, a sealing paste must be used in the temperature range -8 ° C to + 12 ° C.

Measurements in mm

Art.-Nr.	Type	L1	L2	H1	H2	H5	D1	D2	Price in EURO
1603301	DN15/20	125	68	70	44	51,5	26	30	10,70
1603302	DN25/32	156	97	85	60	65	33	43	13,70
1603303	DN40/50	218	132	124	88	100	48	60	16,70
1603304	DN65/80	300	200	188	120	147	77	90	22,40

SERIE MS



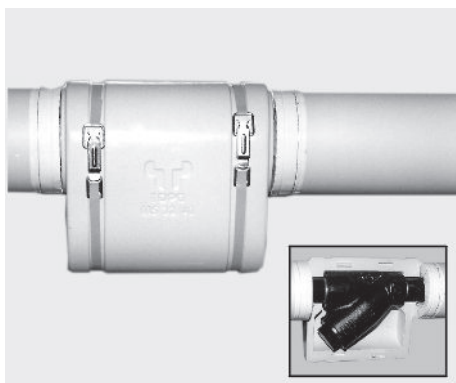
Valves

Makes / manufacturers

For all common strainers with threaded connection

Type MS

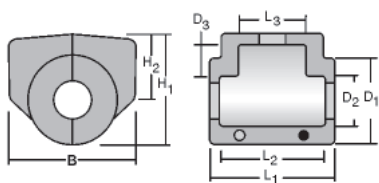
TOPO MS for insulation in the range up to + 130 ° Celsius for mud flaps with sleeves. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.



Measurements in mm

Art.-Nr.	Type	L1	L2	L3	D1	D2	D3	H1	H2	Price in EURO
1501601	MS 15/20	140	95	108	70	40	48	117	35	30,20
1501602	MS 25	162	111	127	85	57	62	138	43	34,20
1501603	MS 32/40	222	155	185	117	75	95	207	62	42,30
1501604	MS 50	260	188	244	140	93	113	242	72	46,30

SERIE ME



Valves

Makes / manufacturers

For diaphragm valves

Saunders

Sisto

Type ME

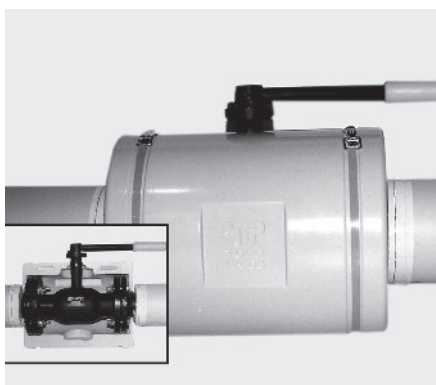
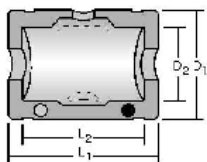
TOPO ME for insulation in the range up to + 130 ° Celsius for diaphragm valves with sleeves. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.



Measurements in mm

Art.-Nr.	Type	B	L1	L2	L3	D1	D2	D3	H1	H2	Price in EURO
1501701	ME 15/20	126	125	94	64	90	47	33	102	59	30,20
1501702	ME 25	140	136	111	75	98	59	34	123	75	34,20
1501703	ME 32	155	156	135	87	118	63	47	150	92	38,30
1501704	ME 40	172	175	149	100	145	85	55	182	110	42,30
1501705	ME 50	212	205	177	117	155	95	45	193	115	46,30

SERIE FK



Valves	Makes / manufacturers
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For diaphragm valves, ball valves, valves with grease, with flanges

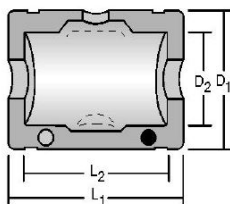
Type FK

TOPO FK for insulation in the range up to + 130° degrees Celsius for ball valves, diaphragm valves and relubricated taps.

According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

Measurements in mm						
Art.-Nr.	Type	L1	L2	D1	D2	Price in EURO
1501101	FK 15	212	180	148	98	46,30
1501102	FK 20/25	250	200	165	120	62,40
1501103	FK32	260	230	200	145	70,50
1501104	FK 40	290	265	230	155	76,50
1501105	FK 50	340	290	250	170	82,60
1501106	FK 65	340	290	270	190	86,60
1501106-I	FK 65-I	440	390	270	190	90,60
1501107	FK 80	400	350	290	205	90,60
1501108	FK 100	445	380	330	230	100,70
1501109	FK 125	510	480	350	258	110,80

SERIE K



Valves	Makes / manufacturers
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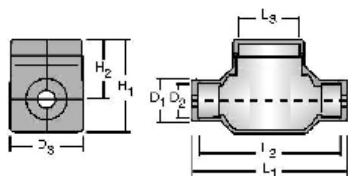
Ball valve with welding ends

Type K

TOPO K for insulation in the range up to + 130° degrees Celsius for ball valves with sockets and welding connection. According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.

Measurements in mm						
Art.-Nr.	Type	L1	L2	D1	D2	Price in EURO
1502401	K 25/50	200	140	145	93	34,20
1502402	K 65	230	170	200	115	54,40
1502403	K 80	230	167	220	135	62,40
1502404	K 100	315	245	245	162	70,50
1502405	K 125	320	245	270	190	110,80
1502406	K 150	440	360	308	225	120,80

SERIE T



Valves

Caps for heat and water meters

Makes / manufacturers

Type T

TOPO T for insulation in the range up to + 130° degrees Celsius for water and heat meters.

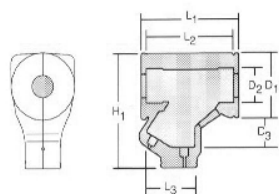
According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.



Maße in mm

Art.-Nr.	Type	L1	L2	L3	D1	D2	D3	H1	H2	Price in EURO
1502705	T 190	225	207	90	70	45	124	154	100	40,30
1502706	T 220	260	238	90	70	45	124	154	100	44,30

SERIE OM



Valves

Line regulating valves STAD
Threaded line regulating valves
BOA-control valve -Control SAR

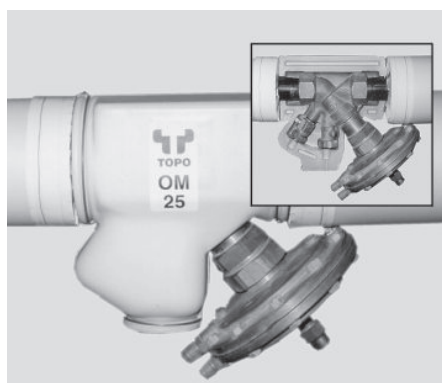
Makes / manufacturers

TA Heimeier
Danfoss
KSB
Oventrop

Type OM

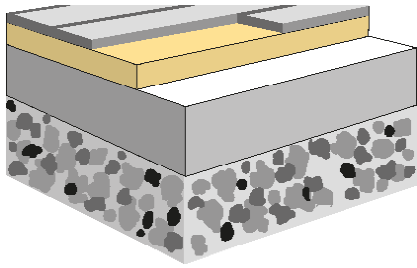
TOPO OM for insulation in the range up to + 130° degrees Celsius.

According to the EnEV consisting of two PUR half-shells, which are coated with PS foil and fixed with straps.



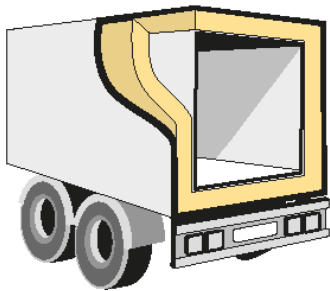
Measurements in mm

Art.-Nr.	Type	L1	L2	L3	D1	D2	D3	H1	Price in EURO
1502902	OM 20	132	115	80	75	45	40	155	30,20
1502903	OM 25	155	140	80	100	53	40	175	34,20
1502904	OM 32	165	140	80	110	60	40	195	38,30
1502905	OM 40	178	150	80	128	65	40	212	43,80
1502906	OM 50	210	185	80	162	83	40	247	46,30



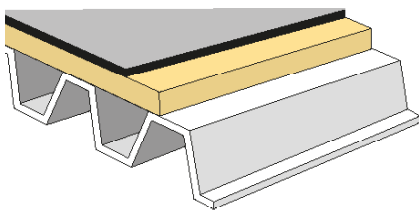
INSULATING FLOORS AND CEILINGS

Tinby Skumplast supplies PUR and PIR for insulating and retro-fitting insulation in floors and ceilings. PUR/PIR provides complete coverage of the floor area so that no cold bridging can occur. Pouring is done directly onto the concrete without using shutters. The finished flooring, such as particle board or parquet flooring, can be laid directly on top of the insulation panels.



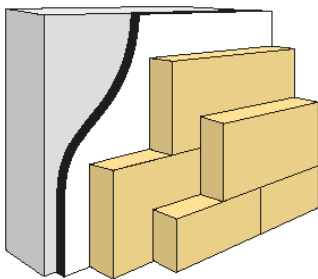
INSULATING IN THE REFRIGERATION SECTOR

We manufacture insulation panels in PUR and PIR for refrigeration vehicles, containers, transport units, portable office structures, and trailers. Insulation sheets in PUR/PIR can be affixed directly onto metal or fibreglass panels (sandwich construction).



INSULATING ROOFS

PUR and PIR are excellent materials for insulating and retro-fitting insulation in roofs in storage facilities and industrial premises. Tinby Skumplast supplies foam panels which can be laid either directly on top of steel plates or directly on top of existing roofing felt, and new asphalt roofing can also be laid on top of insulating foam sheets.



INSULATING WALLS AND CEILINGS

PUR and PIR can be used to insulate and retro-fit insulation in walls, façades and windows in buildings, in gas concrete or in solid walls. The foam panels provide a good base for the final wall coverings, and can be used for external doors as well as façade sections.

COMPRESSIVE STRENGTHS

Density	35 kg/m ³	40 kg/m ³
On surfaces	2.3 kg/cm ²	2.9 kg/cm ²
On the sides	1.5 kg/cm ²	2.0 kg/cm ²

Higher densities can be manufactured to order



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POLYURETHANE/ POLYISOCYANURATE

PUR insulation comprises a group of insulating materials which are based on polyurethane (PUR) or polyisocyanurate (PIR). The closed-cell structure and high crosslink density of these insulating materials give them their excellent insulating properties, efficient heat resistance and high compressive strength.

Insulating with PUR and PIR can help improve the energy efficiency of buildings and reduce CO₂ emissions. PUR is one of the most effective insulation materials available, and can deliver a very high level of thermal efficiency using a minimum of insulating thickness.

With lambda (thermal conductivity) values as low as 0.024 W/m*K, an insulation effect (expressed in U-values) that equals that attained using other insulating materials can be achieved, even though significantly thinner layers of PUR are used.

PUR insulating materials are used:

- In roof construction
- In external wall construction
- In new buildings
- For renovations
- For retro-fitting of insulation
- In subfloors and baseboards
- For insulating refrigerated vehicles
- For insulating temporary portable office structures

We do everything in our power to be the strong partner our clients need - one who is at the forefront of technological developments within our core competencies. Our aim, as a supplier, is to offer our clients total flexibility.

PRICE LIST TOPO DHS
INSULATION CAPS FOR DISTRICT HEATING VALVES

Typ	AK	B	R	DM	F	FL	KH
Størrelse							
DN 10							
DN 15		B DN15 8,50	R DN15 12,70	DM DN15 15,50			KH DN15 10,70
DN 20		B DN20 8,50	R DN20 12,70	DM DN20 15,50	F DN20 23,80	FL DN20 35,50	KH DN20 10,70
DN 25	AK DN25 25,80	B DN25 9,70	R DN25 15,50	DM DN25 20,60	F DN25 25,80	FL DN25 38,50	KH DN25 13,70
DN 32	AK DN32 29,60	B DN32 9,70	R DN32 15,50	DM DN32 20,60	F DN32 29,60	FL DN32 43,90	KH DN32 13,70
DN 40	AK DN40 33,80	B DN40 12,70	R DN40 32,60	DM DN40 20,60	F DN40 33,90	FL DN40 50,80	KH DN40 16,75
DN 50	AK DN50 40,70	B DN50 12,70	R DN50 32,60	DM DN50 20,60	F DN50 40,50	FL DN50 60,90	KH DN50 16,75
DN 65	AK DN65 49,00	B DN65 23,20	R DN65 37,50		F DN65 48,80	FL DN65 72,90	KH DN 65 22,40
DN 80	AK DN80 60,20	B DN80 23,20	R DN80 37,50		F DN80 60,20		KH DN80 22,40
DN 100	AK DN100 77,30	B DN100 35,90	R DN100 47,90		F DN100 76,80	FL DN100 109,80	
DN 125		B DN125 42,30	R DN125 67,90		F DN125 97,30		
DN 150							

PRICE LIST TOPO ENERGY BOX
INSULATION CAPS

Typ		MS		ME		FK		K		T		OM	
Størrelse		"til snavssamlere med muffer"		"til membranventiler med muffer"		"til Flange-, kugle og membranventiler"		"til kugleventiler med muffer"		"Vand- og varmemålere"		"til strengreguleringsventiler"	
DN 10													
DN 15			MS-015 30,20		ME-015 30,20		FK-015 46,30						
DN 20			MS-020 30,20		ME-020 30,20		FK-020 32,40						OM-020 30,20
DN 25			MS-025 34,20		ME-025 34,20		FK-025 62,40		K-025 34,20				OM-025 34,20
DN 32			MS-032 42,30		ME-032 42,30		FK-032 70,50		K-032 34,20				OM-032 38,30
DN 40			MS-040 42,30		ME-040 42,30		FK-040 76,50		K-040 34,20				OM-040 43,80
DN 50			MS-050 46,30		ME-050 46,30		FK-050 82,60		K-050 34,20				OM-050 30,87
DN 65							FK-065 86,60		K-065 54,40				
DN 80							FK-080 90,60		K-080 62,40				
DN 100							FK-100 110,70		K-100 70,50				
DN 125							FK-125 110,80		K-125 110,80				
DN 150									K-150 120,80				
											T190 40,30		
											T220 44,30		

PRISLISTE TOPO ENERGY BOX, PS

Enter an exact fixture type with each order.

Muffe														Flange					
Type	KHM	PKH	GVM	SVK	SVM	SFM	OMG	HCM	HSG	DWM	USV	UKM	FPA	FKL	BSC	FKV	FVL	SVF	DWV
Størrelse																			
DN 10	KHM-PS-010 17,40		GVM-PS-010 24,60	SVK-PS-010 24,60	SVM-PS-010 24,60	SFM-PS-010 24,60	OMG-PS-010 27,50	HCM-PS-010 27,50	HSG-PS-010 28,80	DWM-PS-010 28,80	USV-PS-010 27,50	UKM-PS-010 24,60							
DN 15	KHM-PS-015 17,90		GVM-PS-015 25,10	SVK-PS-015 25,10	SVM-PS-015 25,10	SFM-PS-015 25,10	OMG-PS-015 28,50	HCM-PS-015 28,50	HSG-PS-015 28,80	DWM-PS-015 28,80	USV-PS-015 28,50	UKM-PS-015 25,10	FPA-PS-015 *	FKL-PS-015 41,00	BSC-PS-015 53,00	FKV-PS-015 52,70	FVL-PS-015 56,60	SVF-PS-015 56,60	DWV-PS-015 86,00
DN 20	KHM-PS-020 18,80	PKH-PS-025 18,80	GVM-PS-020 26,30	SVK-PS-020 26,30	SVM-PS-020 26,30	SFM-PS-020 26,30	OMG-PS-020 28,50	HCM-PS-020 28,50	HSG-PS-020 28,80	DWM-PS-020 28,80	USV-PS-020 28,50	UKM-PS-020 26,30	FPA-PS-020 *	FKL-PS-020 41,70	BSC-PS-020 55,10	FKV-PS-020 53,00	FVL-PS-020 58,10	SVF-PS-020 58,10	DWV-PS-020 87,80
DN 25	KHM-PS-025 21,20	PKH-PS-031 21,20	GVM-PS-025 29,70	SVK-PS-025 29,70	SVM-PS-025 29,70	SFM-PS-025 29,70	OMG-PS-025 32,70	HCM-PS-025 32,70	HSG-PS-025 32,90	DWM-PS-025 32,90	USV-PS-025 32,70	UKM-PS-025 29,70	FPA-PS-025 *	FKL-PS-025 47,00	BSC-PS-025 56,60	FKV-PS-025 55,70	FVL-PS-025 62,60	SVF-PS-025 62,60	DWV-PS-025 93,30
DN 32	KHM-PS-032 25,50	PKH-PS-032 25,40	GVM-PS-032 32,40	SVK-PS-032 32,40	SVM-PS-032 32,40	SFM-PS-032 32,40	OMG-PS-032 35,00	HCM-PS-032 35,00	HSG-PS-032 35,60	DWM-PS-032 35,60	USV-PS-032 35,00	UKM-PS-032 32,40	FPA-PS-032 *	FKL-PS-032 53,00	BSC-PS-032 66,90	FKV-PS-032 63,60	FVL-PS-032 72,30	SVF-PS-032 72,30	DWV-PS-032 106,10
DN 40	KHM-PS-040 30,60		GVM-PS-040 36,50	SVK-PS-040 36,50	SVM-PS-040 36,50	SFM-PS-040 36,50	OMG-PS-040 38,00	HCM-PS-040 38,00	HSG-PS-040 40,10	DWM-PS-040 40,10	USV-PS-040 38,00	UKM-PS-040 36,50	FPA-PS-040 *	FKL-PS-040 63,00	BSC-PS-040 73,50	FKV-PS-040 72,00	FVL-PS-040 82,40	SVF-PS-040 82,40	DWV-PS-040 120,50
DN 50	KHM-PS-050 36,80		GVM-PS-050 41,00	SVK-PS-050 41,00	SVM-PS-050 41,00	SFM-PS-050 41,00	OMG-PS-050 41,70	HCM-PS-050 41,70	HSG-PS-050 44,60	DWM-PS-050 44,60	USV-PS-050 41,70	UKM-PS-050 41,00	FPA-PS-050 *	FKL-PS-050 68,60	BSC-PS-050 82,10	FKV-PS-050 80,70	FVL-PS-050 98,60	SVF-PS-050 98,60	DWV-PS-050 141,90
DN 65							OMG-PS-065 55,40						FPA-PS-065 *	FKL-PS-065 77,10	BSC-PS-065 96,30	FKV-PS-065 93,00	FVL-PS-065 119,90	SVF-PS-065 119,90	DWV-PS-065 169,40
DN 80													FPA-PS-080 *	FKL-PS-080 89,60	BSC-PS-080 112,10	FKV-PS-080 110,30	FVL-PS-080 147,20	SVF-PS-080 147,20	DWV-PS-080 207,00
DN 100													FPA-PS-100 *	FKL-PS-100 99,20	BSC-PS-100 128,10	FKV-PS-100 127,50	FVL-PS-100 188,40	SVF-PS-100 188,40	DWV-PS-100 262,10
DN 125													FPA-PS-125 *	FKL-PS-125 119,40	BSC-PS-125 145,50	FKV-PS-125 144,80	FVL-PS-125 212,40	SVF-PS-125 212,40	DWV-PS-125 306,20
DN 150													FPA-PS-150 *	FKL-PS-150 144,50	BSC-PS-150 159,30	FKV-PS-150 164,90	FVL-PS-150 256,10	SVF-PS-150 256,10	DWV-PS-150 325,20

PRICE LIST TOPO ENERGY BOX, ALU

Please indicate an exat fitting type with each order

Type		Muffe										Flange						
		KHM	PKH	GVM	SVK	SVM	SFM	OMG	HCM	HSG	DWM	FPA	FKL	BSC	FKV	FVL	SVF	DWV
Størrelse																		
DN 10	KHM-AL-010 *		GVM-AL-010 *	SVK-AL-010 *	SVM-AL-010 31,10	SFM-AL-010 *	OMG-AL-010 *	HCM-AL-010 *	HSG-AL-010 *	DWM-AL-010 35,60								
DN 15	KHM-AL-015 *		GVM-AL-015 *	SVK-AL-015 *	SVM-AL-015 32,00	SFM-AL-015 *	OMG-AL-015 *	HCM-AL-015 *	HSG-AL-015 *	DWM-AL-015 35,60	FPA-AL-015 *	FKL-AL-015 50,00	BSC-AL-015 *	FKV-AL-015 *	FVL-AL-015 *	SVF-AL-015 52,50	DWM-AL-015 56,40	
DN 20	KHM-AL-020 *	PKH-AL-025 *	GVM-AL-020 *	SVK-AL-020 *	SVM-AL-020 32,40	SFM-AL-020 *	OMG-AL-020 *	HCM-AL-020 *	HSG-AL-020 *	DWM-AL-020 36,30	FPA-AL-020 *	FKL-AL-020 51,80	BSC-AL-020 *	FKV-AL-020 *	FVL-AL-020 *	SVF-AL-020 56,70	DWM-AL-020 58,50	
DN 25	KHM-AL-025 *	PKH-AL-031 *	GVM-AL-025 *	SVK-AL-025 *	SVM-AL-025 36,90	SFM-AL-025 *	OMG-AL-025 *	HCM-AL-025 *	HSG-AL-025 *	DWM-AL-025 40,40	FPA-AL-025 *	FKL-AL-025 55,50	BSC-AL-025 *	FKV-AL-025 *	FVL-AL-025 *	SVF-AL-025 59,00	DWM-AL-025 61,20	
DN 32	KHM-AL-032 *	PKH-AL-032 *	GVM-AL-032 *	SVK-AL-032 *	SVM-AL-032 40,40	SFM-AL-032 *	OMG-AL-032 *	HCM-AL-032 *	HSG-AL-032 *	DWM-AL-032 44,00	FPA-AL-032 *	FKL-AL-032 59,60	BSC-AL-032 *	FKV-AL-032 *	FVL-AL-032 *	SVF-AL-032 67,20	DWM-AL-032 69,30	
DN 40	KHM-AL-040 *		GVM-AL-040 *	SVK-AL-040 *	SVM-AL-040 43,80	SFM-AL-040 *	OMG-AL-040 *	HCM-AL-040 *	HSG-AL-040 *	DWM-AL-040 46,20	FPA-AL-040 *	FKL-AL-040 62,30	BSC-AL-040 *	FKV-AL-040 *	FVL-AL-040 *	SVF-AL-040 71,00	DWM-AL-040 73,40	
DN 50	KHM-AL-050 *		GVM-AL-050 *	SVK-AL-050 33,30	SVM-AL-050 50,00	SFM-AL-050 *	OMG-AL-050 *	HCM-AL-050 *	HSG-AL-050 *	DWM-AL-050 53,10	FPA-AL-050 *	FKL-AL-050 67,10	BSC-AL-050 *	FKV-AL-050 *	FVL-AL-050 *	SVF-AL-050 79,10	DWM-AL-050 82,40	
DN 65							OMG-AL-065 *				FPA-AL-065 *	FKL-AL-065 74,60	BSC-AL-065 *	FKV-AL-065 *	FVL-AL-065 *	SVF-AL-065 96,80	DWM-AL-065 102,30	
DN 80											FPA-AL-080 *	FKL-AL-080 90,60	BSC-AL-080 *	FKV-AL-080 *	FVL-AL-080 *	SVF-AL-080 115,50	DWM-AL-080 122,40	
DN 100											FPA-AL-100 *	FKL-AL-100 107,40	BSC-AL-100 *	FKV-AL-100 *	FVL-AL-100 *	SVF-AL-100 141,60	DWM-AL-100 151,50	
DN 125											FPA-AL-125 *	FKL-AL-125 122,90	BSC-AL-125 *	FKV-AL-125 *	FVL-AL-125 *	SVF-AL-125 166,40	DWM-AL-125 182,60	
DN 150											FPA-AL-150 *	FKL-AL-150 130,20	BSC-AL-150 *	FKV-AL-150 *	FVL-AL-150 *	SVF-AL-150 190,80	DWM-AL-150 210,20	

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www.tinby.dk

CONDITIONS OF SALE AND TERMS OF DELIVERY FOR PLASTIC COMPONENTS

1. Terms of Delivery

Delivery shall be made in accordance with Incoterms 2000 EXW (Ex Works)

2. Terms of payment

Payment shall be made in Danish kroner, unless otherwise agreed in writing.

If payment is not made when due, interest shall be charged at 1% per month or part thereof.

3. Property reservation and retention right

TINBY shall retain property in the delivered products, until the full purchase sum with interest, costs, etc., has been paid. TINBY may retain tools, until all outstanding amounts have been paid.

4. Complaints

All and any risks related to the goods shall pass to the Buyer at the time of delivery of the goods. Any complaints regarding the goods shall be made in writing to TINBY as soon as possible, but not later than eight days after delivery. If TINBY has not received the complaint within the stated deadline, the Buyer's right to object to quantity and quality shall be lost.

TINBY shall be entitled and obliged to remedy all deficiencies. TINBY itself shall decide whether such remedial action shall take the form of repair or replacement of the defective part/s, or a replacement delivery.

TINBY's liability shall only cover deficiencies which appear within twelve months of the date of delivery.

Other than as mentioned above, TINBY shall not be liable for deficiencies. This concerns any loss which the deficiency may cause, including operating loss, loss of profit or other financial, consequential losses.

5. Warranties

If TINBY has undertaken to offer a warranty, this warranty shall cover defects and deficiencies in materials and manufacture. A warranty offered by TINBY does not cover defects and deficiencies caused by inadequate maintenance, incorrect installation, changes made by the Buyer or incorrect use of the product. Furthermore, the warranty does not cover normal wear and normal deterioration. TINBY's warranty obligation requires that the Buyer is able to document that any ascertained defect or deficiency has not been caused by the elements exempted from the warranty, cf. above.

The Buyer shall notify TINBY in writing of any defects or deficiencies in the products sold not later than eight days after the defect or deficiency was or should have been discovered by the Buyer. If the Buyer does not notify TINBY by this deadline and before the expiry of the warranty period, the Buyer shall lose his right to advance any claims in relation to such defect or deficiency.

TINBY shall be entitled and obliged to remedy all deficiencies covered by a warranty issued by TINBY. It is up to TINBY itself to decide whether such remedial action shall take the form of repair or replacement of the defective part/s, all on the terms stated under item 4.

TINBY shall have no other liability in connection with such deficiencies. This applies to any loss caused by the deficiency, including operating loss, loss of profit or any other financial, consequential losses.

6. Product liability

The Buyer shall indemnify TINBY to the extent TINBY is held liable towards a third party for such damage and such loss for which TINBY is not liable towards the Buyer in accordance with this item.

TINBY shall not be liable for damage caused by the products sold:

a) on real property or chattels, where such damage occurs while the equipment is in the Buyer's possession.

b) on products manufactured by the Buyer or products in which such products form part, or for damage to real property or chattels caused by such products as a result of the products sold.

In no case shall TINBY be liable for operating loss, loss of profit or any other financial, consequential losses.

If a third party advances a claim against either party for damages in accordance with this item, the party against which the claim is advanced shall immediately inform the other party. TINBY and the Buyer shall be mutually obliged to let themselves be sued before the court or arbitration tribunal, which deals with the compensation claim advanced against either of them on the basis of damage or loss claimed to be caused by the equipment. However, disputes between the Buyer and TINBY shall always be decided before the agreed venue in accordance with these Conditions of Sale and Terms of Delivery.

7. Delays

If a delay occurs, the Buyer shall be informed accordingly. In case of a delay, the Buyer shall not acquire any other rights than to be able to cancel the agreement. The Buyer may only cancel the agreement if the delay is significant to the Buyer and the delay can be attributed to TINBY. In such case, the Buyer shall – after delivery was to have been made – forward a written request to TINBY that delivery be made within three weeks. If delivery is not made within the three-week deadline, the Buyer may cancel the purchase.

8. Insurance, storage and maintenance of tools

The Buyer shall be obliged to take out insurance covering tools stored by TINBY. Such insurance shall cover fire, theft, wilful and fortuitous destruction.

If the tools are stored by TINBY, TINBY shall store the Buyer's tools safely and maintain them.

If tools are stored, but not used, the Buyer shall pay DKK 3,000 per year storage rent. Tools which have not been used for three years may be returned by TINBY for the Buyer's account.

9. Disclaimer and force majeure

The following circumstances shall release TINBY from any liability, provided such circumstances occur after the agreement was made, and these circumstances shall also release TINBY from any duty to execute the agreement:

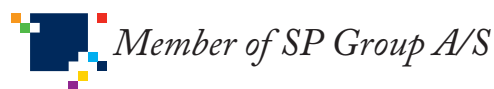
Strike, lock-out, business interruption, delayed delivery from subcontractors and similar cases which delay the time of delivery correspondingly. War, civil unrest, Acts of God and similar circumstances beyond the parties' control, including shortage of goods, seizure, currency restrictions or authority intervention shall entitle TINBY to fully or partially cancel any offer made or any standing order. The party claiming force majeure shall be obliged to inform the other party by express letter / fax / e-mail within 14 days of such a force majeure situation occurring.

10. Disputes

All and any disputes between the parties shall be decided in accordance with Danish law. Attempts shall always be made to settle disputes amicably. If a dispute cannot be settled amicably, such dispute shall be decided by the Danish Institute of Arbitration in Copenhagen. However, TINBY may choose to file a lawsuit with the ordinary courts of law.

TINBY A/S

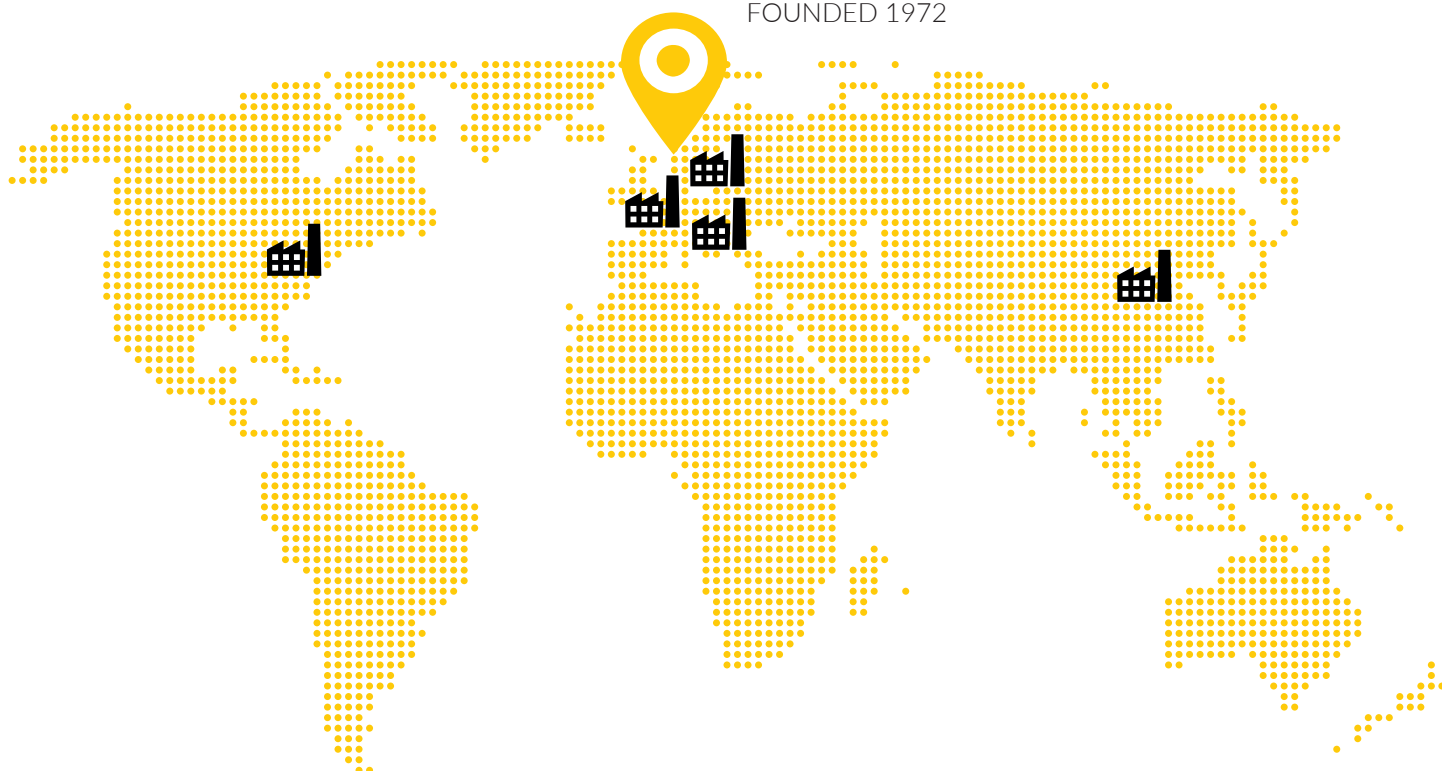
- A PART OF SP GROUP



Tinby A/S was founded in 1972 and is today Scandinavia's leading supplier of polyurethane solutions. Our blanks, made from flexible, solid, or foamed polyurethane, are used in furniture, instruments, window insulation, and wind turbines, among other applications. As a comprehensive supplier, we develop highly specialised plastics to meet diverse product requirements. Additionally, we offer a wide range of technologies and techniques for refining the material.

SP GROUP A/S

MAIN OFFICE IN DENMARK,
FOUNDED 1972



Sales and marketing in

97
COUNTRIES



An average of

2.336
EMPLOYEES



Production in

12
COUNTRIES



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