

 **wates**





Hakkımızda

İstanbul Genleşme ve Hidrofor Tankları A.Ş. 2011 yılında hidrofor tankını teknoloji ve kreatif iş anlayışı ile buluşturma hedefiyle kurulmuştur. Firmamız tescilli Wates markası genleşme tankları üretmeye başlamıştır.

Günümüzde Wates, Kocaeli'nin Gebze ilçesinde toplam 15.000 m2 kapalı alana sahip olup 70'den fazla ülkeye ihracat yapmaktadır.

Wates en yeni teknoloji makine ve ekipman yatırımlarıyla müşteri memnuniyetini ön planda tutarak, genleşme tankı sektöründe öncü isim konumundadır.

Firmamız daima kaliteli hizmet, zamanında teslim ve uygun fiyat ile müşterilerine bugün ve gelecekte hizmet vermeye devam edecektir.



About us

İstanbul Genleşme ve Hidrofor Tankları A.Ş. was established in 2011 with the aim of bringing the expansion tank with technology and creative business approach. Started to produce registered Wates branded expansion tanks.

Today, Wates has a total closed area of 15.000 m2 in Gebze, Kocaeli and exports to more than 70 countries.

Wates is the pioneer in the expansion tank sector, keeping customer satisfaction at the forefront with the latest technology machinery and equipment investment.

Today and in the future our company will always continue to serve customers with quality service, timely delivery and reasonable price.



A propos de nous



La société İstanbul Genleşme ve Hidrofor Tankları A.Ş. a été fondée en 2011 dans le but de réunir le réservoir de surpresseur avec la technologie et l'approche créative d'affaires.

Notre société a commencé à produire les vases d'expansion sous la marque déposée Wates.

Aujourd'hui Wates possède un espace couvert de 15.000 m² au total à l'arrondissement de Gebze de Kocaeli et exporte vers plus de 70 pays. En tenant au premier plan la satisfaction du client avec ses investissements en machines et équipements de dernière technologie Wates est en position de leader dans le secteur de vase d'expansion.

Notre société continuera à fournir ses services à ses clients dans le futur comme aujourd'hui avec un service de qualité, la livraison dans les délais et les prix raisonnables.

Sobre Nosotros



İstanbul Genleşme ve Hidrofor Tankları A.Ş. se estableció en 2011 con el objetivo de combinar el tanque hidroforo con la tecnología y el concepto creativo de negocio. Nuestra empresa comenzó a producir tanques de expansión de marca Wates registrados oficialmente.

Hoy, Wates tiene un área cerrada total de 15.000 m² en Gebze, Kocaeli y exporta a más de 70 países.

Wates es el pionero en la industria de tanques de expansión, manteniendo la satisfacción del cliente a la vanguardia con sus últimas inversiones en la maquinaria y los equipos de tecnología.

Nuestra empresa siempre continuará sirviendo a sus clientes con un servicio de calidad, entrega oportuna y precios razonables.

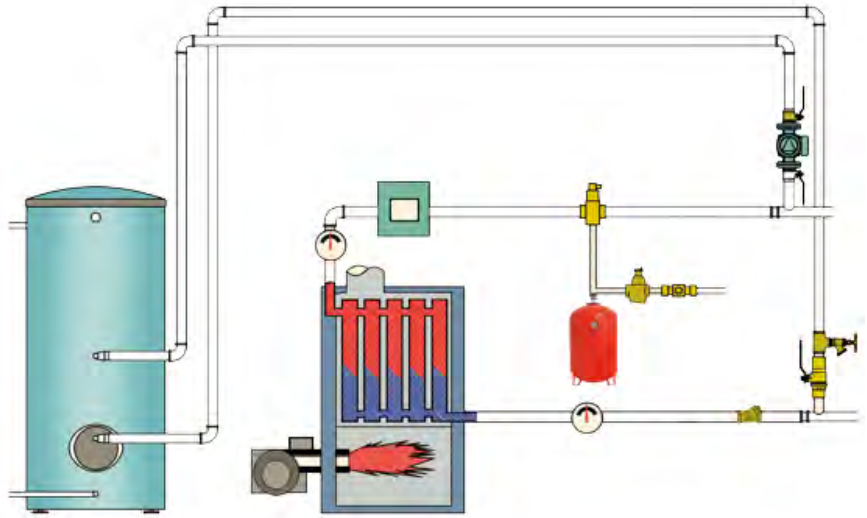


Isıtma Sistemleri İçin Kapalı Genleşme Tankı

Closed Expansion Tank For Heating Systems

Vase d'expansion fermé pour les systèmes de chauffage

Tangue de Expensión Cerrado para Sistemas de Calefacción



6 Bar Dikey Kapalı Genleşme Tankı Serisi

6 Bar Vertical Closed Expansion Tank Series

Série de vases d'expansion fermés, verticaux, de 6 bars

Tanque de Expansion Vertical/Cerrado (6 Bares)



Kapalı ısıtma sistemleri için değiştirilebilir membranlı genleşme tankı
Expansion tank with replaceable membrane for closed heating systems
Vase d'expansion a membrane remplaçable pour les systèmes fermés de chauffage
Tanque de expansion con membrana intercambiable para sistemas de calefacción cerrados

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

6 BAR

Standart Önceden Belirlenmiş Basıncı
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

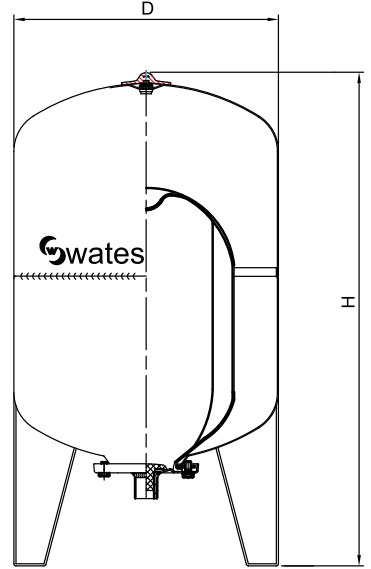
2 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 6 K	24 LT	2	1"	280	470
WAT 6 K	35 LT	2	1"	380	470
WAT 6 K	50 LT	2	1"	380	750
WAT 6 K	60 LT	2	1"	380	810
WAT 6 K	80 LT	2	1"	460	915
WAT 6 K	100 LT	2	1"	460	990
WAT 6 K	150 LT	2	1"	500	1100
WAT 6 K	200 LT	2	1-1/4"	585	1120
WAT 6 K	300 LT	2	1-1/4"	635	1230
WAT 6 K	500 LT	2	1-1/4"	750	1550
WAT 6 K	750 LT	2	2"	800	1850
WAT 6 K	900 LT	2	2"	800	1950
WAT 6 K	1000 LT	2	2"	800	2180

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color



6 Bar Ters Flanşlı Kapalı Genleşme Tankı Serisi

6 Bar Upper Flanged Closed Expansion Tank Series

Série de vases d'expansion fermés de 6 bars a bride renversée

Tanque de Expansion Cerrado con Bridas Inversas (6 Bares)



Kapalı ısıtma sistemleri için değiştirilebilir membranlı genleşme tankı
Expansion tank with replaceable membrane for closed heating systems
Vase d'expansion a membrane remplaçable pour les systèmes fermés de chauffage
Tanque de expansion con membrana intercambiable para sistemas de calefacción cerrados

CE direktifi uyarınca işaretlenmiş

CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı

Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

6 BAR

Standart Önceden Belirlenmiş Basıncı

Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

2 BAR

Çalışma Sıcaklığı

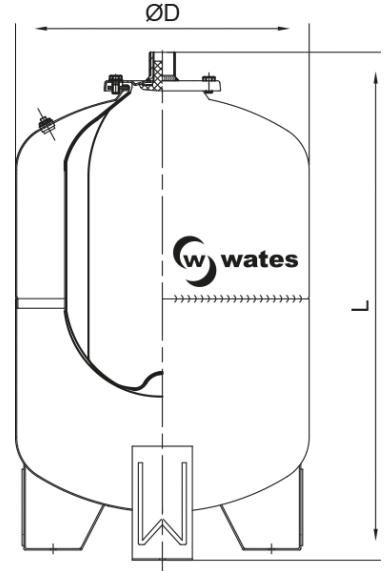
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü

Membrane type
Type de membrane
Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 6 R	35 LT	2	1"	380	470
WAT 6 R	50 LT	2	1"	380	620
WAT 6 R	60 LT	2	1"	380	720
WAT 6 R	80 LT	2	1"	460	700
WAT 6 R	100 LT	2	1"	460	815
WAT 6 R	150 LT	2	1"	500	970
WAT 6 R	200 LT	2	1-1/4"	585	970
WAT 6 R	300 LT	2	1-1/4"	635	1115
WAT 6 R	500 LT	2	1-1/4"	750	1370

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Color / Opciones de Color



10 Bar Dikey Genleşme Tankı Serisi

10 Bar Vertical Pressure Tank Series

Série de vases d'expansion fermés, verticaux, de 10 bars

Tanque de Expansion Vertical (10 Bares)

Pompa sistemleri için değiştirilebilir membranlı genleşme tankı
Pressure tank with replaceable membrane for booster set
Vase d'expansion a membrane remplaçable pour les systèmes de pompe
Tanque de expansion con membrana intercambiable para sistemas de bombeo

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

10 BAR

Standart Önceden Belirlenmiş Basıncı
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

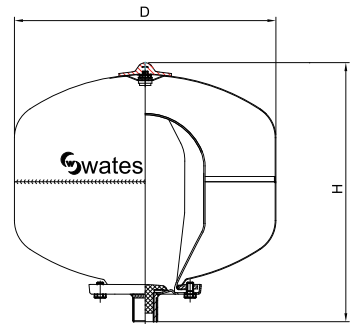
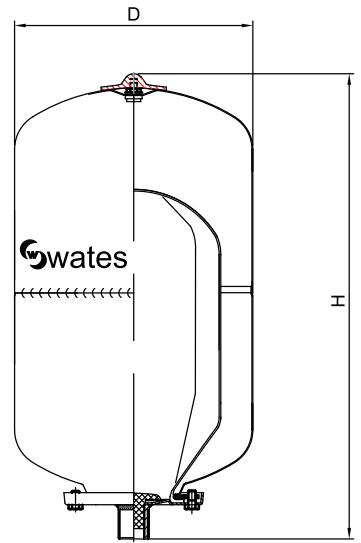
2 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM



Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 10 L	2 LT	2	1"	120	242
WAT 10 L	5 LT	2	1"	160	300
WAT 10 L	8 LT	2	1"	202	320
WAT 10 L	12 LT	2	1"	280	300
WAT 10 L	19 LT	2	1"	280	430
WAT 10 L	24 LT	2	1"	280	470
WAT 10 L	35 LT	2	1"	380	470
WAT 10 L	50 LT	2	1"	380	620

10 Bar Küre Genleşme Tankının Teknik Özellikleri

10 Bar Technical Specifications of Oval Pressure Tank
Specifications Techniques des Vases d'expansion Spheriques de 10 bars
Especificaciones Tecnicas para Tanque de Expansion Esfera (10 Bares)

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 10 O	24 LT	2	1"	360	330

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

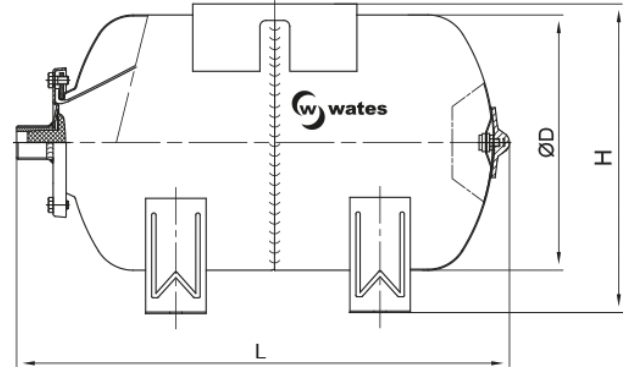
Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

10 Bar Yatık Genleşme Tankı Serisi

10 Bar Horizontal Pressure Tank Series

Série de vases d'expansion horizontaux de 10 bars

Tanque de Expansion Horizontal (10 Bares)



Pompa sistemleri için değiştirilebilir membranlı genleşme tankı
Pressure tank with replaceable membrane for booster set
Vase d'expansion a membrane remplaçable pour les systèmes de pompe
Tanque de expansion con membrana intercambiable para sistemas de bombeo

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

10 BAR

Standart Önceden Belirlenmiş Basıncı
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

2 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM

Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 10 H	24LT	2	1"	280	470
WAT 10 H	50 LT	2	1"	380	620
WAT 10 H	60 LT	2	1"	380	700
WAT 10 H	80 LT	2	1"	460	750
WAT 10 H	100 LT	2	1"	460	800

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color

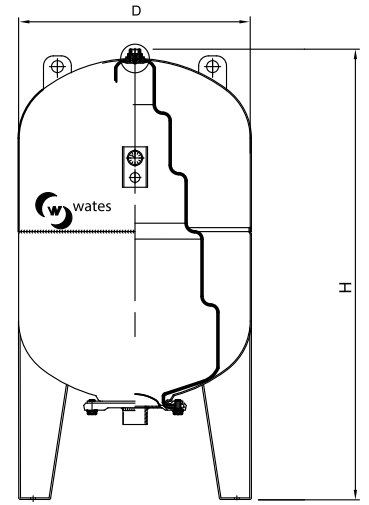


10 Bar Dikey Genleşme Tankı Serisi

10 Bar Vertical Pressure Tank Series

Série de vases d'expansion fermés, verticaux, de 10 bars

Tanque de Expansion Vertical (10 Bares)



Pompa sistemleri için değiştirilebilir membranlı genleşme tankı
Pressure tank with replaceable membrane for booster set
Vase d'expansion a membrane remplaçable pour les systèmes de pompe
Tanque de expansion con membrana intercambiable para sistemas de bombeo

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

10 BAR

Standart Önceden Belirlenmiş Basınç
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

4 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM

Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modelo	Hacim Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Pré-pression de Gaz Presion Previa	Bağlantı Connection Conexion	Çap Dia Diametro	Yükseklik Height Hauteur	Model Model Modelo	Hacim Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Pré-pression de Gaz Presion Previa	Bağlantı Connection Conexion	Çap Dia Diametro	Yükseklik Height Hauteur
WAT 10 V	50 LT	4	1"	380	750	WAT 10 V	1000 LT	4	2"	800	2180
WAT 10 V	60 LT	4	1"	380	810	WAT 10 V	1250 LT	4	2"	958	2220
WAT 10 V	80 LT	4	1"	460	915	WAT 10 V	1500 LT	4	2"	958	2380
WAT 10 V	100 LT	4	1"	460	990	WAT 10 V	2000 LT	4	2"	1100	2520
WAT 10 V	150 LT	4	1"	500	1100	WAT 10 V	2500 LT	4	2"	1200	2500
WAT 10 V	200 LT	4	1-1/4"	585	1120	WAT 10 V	3000 LT	4	2-1/2"	1200	2800
WAT 10 V	300 LT	4	1-1/4"	635	1230	WAT 10 V	4000 LT	4	3"	1500	2940
WAT 10 V	500 LT	4	1-1/4"	750	1550	WAT 10 V	5000 LT	4	3"	1500	3600
WAT 10 V	750 LT	4	2"	800	1810	WAT 10 V	10000 LT	4	DIN 100	1600	5750
WAT 10 V	900 LT	4	2"	800	1950						

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color



16 Bar Dikey Genleşme Tankı Serisi

16 Bar Vertical Pressure Tank Series

Série de vases d'expansion fermés, verticaux, de 16 bars

Tanque de Expansion Vertical (16 Bares)

Pompa sistemleri için değiştirilebilir membranlı genleşme tankı
Pressure tank with replaceable membrane for booster set
Vase d'expansion a membrane remplaçable pour les systèmes de pompe
Tanque de expansion con membrana intercambiable para sistemas de bombeo

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

16 BAR

Standart Önceden Belirlenmiş Basıncı
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

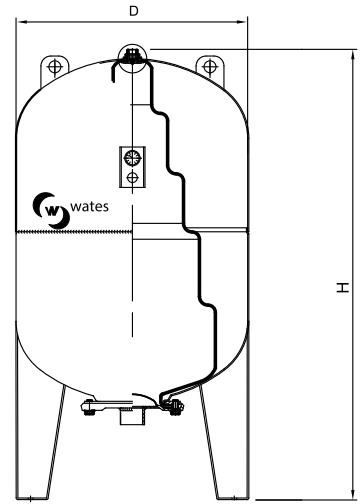
4 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Pré-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexión	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura	Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Pré-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexión	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 16 V	8 LT	4	1"	220	320	WAT 16 V	500 LT	4	1-1/4"	750	1550
WAT 16 V	12 LT	4	1"	280	300	WAT 16 V	750 LT	4	2"	800	1850
WAT 16 V	19 LT	4	1"	280	430	WAT 16 V	1000 LT	4	2"	800	2180
WAT 16 V	24 LT	4	1"	280	470	WAT 16 V	1250 LT	4	2"	958	2220
WAT 16 V	35 LT	4	1"	380	470	WAT 16 V	1500 LT	4	2"	958	2380
WAT 16 V	50 LT	4	1"	380	750	WAT 16 V	2000 LT	4	2"	1100	2520
WAT 16 V	60 LT	4	1"	380	810	WAT 16 V	2500 LT	4	2"	1200	2500
WAT 16 V	80 LT	4	1"	460	915	WAT 16 V	3000 LT	4	2-1/2"	1200	2800
WAT 16 V	100 LT	4	1"	460	990	WAT 16 V	4000 LT	4	3"	1500	2940
WAT 16 V	150 LT	4	1"	500	1100	WAT 16 V	5000 LT	4	3"	1500	3600
WAT 16 V	200 LT	4	1-1/4"	585	1120	WAT 16 V	10000 LT	4	DIN 100	1600	5750
WAT 16 V	300 LT	4	1-1/4"	635	1230						

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color



25 Bar Dikey Genleşme Tankı Serisi

25 Bar Vertical Pressure Tank Series

Série de vases d'expansion fermés, verticaux, de 25 bars

Tanque de Expansion Vertical (25 Bares)

Pompa sistemleri için değiştirilebilir membranlı genleşme tankı
Pressure tank with replaceable membrane for booster set
Vase d'expansion a membrane remplaçable pour les systèmes de pompe
Tanque de expansion con membrana intercambiable para sistemas de bombeo

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

25 BAR

Standart Önceden Belirlenmiş Basınç
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

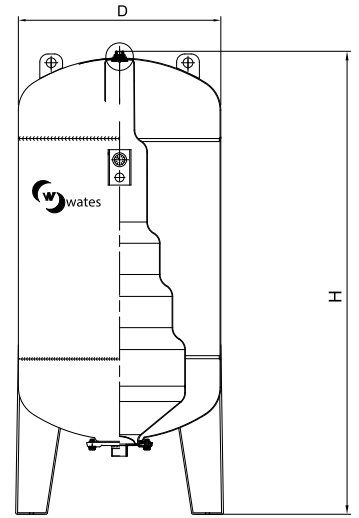
4 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications Spécifications Techniques Especificaciones Técnicas

Model Modèle Modelo	Hacim Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura	Model Modèle Modelo	Hacim Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 25 V	8 LT	4	1"	219	330	WAT 25 V	750 LT	4	2"	800	1850
WAT 25 V	24 LT	4	1"	280	470	WAT 25 V	1000 LT	4	2"	800	2180
WAT 25 V	50 LT	4	1"	380	750	WAT 25 V	1500 LT	4	2"	958	2380
WAT 25 V	60 LT	4	1"	380	810	WAT 25 V	2000 LT	4	2"	1100	2520
WAT 25 V	80 LT	4	1"	450	910	WAT 25 V	2500 LT	4	2"	1200	2550
WAT 25 V	100 LT	4	1"	450	960	WAT 25 V	3000 LT	4	2-1/2"	1200	2800
WAT 25 V	150 LT	4	1"	500	1100	WAT 25 V	4000 LT	4	3"	1500	2940
WAT 25 V	200 LT	4	1-1/4"	600	1120	WAT 25 V	5000 LT	4	3"	1500	3600
WAT 25 V	300 LT	4	1-1/4"	640	1230	WAT 25 V	10000 LT	4	DIN 100	1600	5750
WAT 25 V	500 LT	4	1-1/4"	750	1550						

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Coloris / Opciones de Color



Güneş Enerjisi Sistemleri İçin Genleşme Tankı

Expansion Tank For Solar Systems

Vase d'expansion fermé pour les systèmes d'énergie solaire

Tangue de Expensi3n Cerrado para Sistemas de Energia Solar



10 Bar Güneş Enerji Sistemleri İçin Kapalı Genleşme Tankı Serisi

10 Bar Closed Expansion Tank Series For Solar Systems

Vase d'expansion fermé de 10 bars pour les systemes d'énergie solarie

Tanque de Expansion Cerrado para Sistemas de Energia Solar (10 Bares)

Kapalı ısıtma sistemleri için değiştirilebilir membranlı genleşme tankı

Expansion tank with replaceable membrane for closed heating systems

Vase d'expansion a membrane remplaçable pour les systèmes fermés de chauffage

Tanque de expansion con membrana intercambiable para sistemas de calefaccion cerrados

CE direktifi uyarınca işaretlenmiş

CE marked according to directive

Marqué conformément à la directive CE

Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı

Maximum working pressure

Pression maximum de service

Presion maxima de trabajo

10 BAR

Standart Önceden Belirlenmiş Basıncı

Standart pre-set pressure

Pression normale prédéterminée

Presion predeterminada estandar

2 BAR

Çalışma Sıcaklığı

Working temperature

Température de fonctionnement

Temperatura de funcionamiento

-10 °C / +140 °C

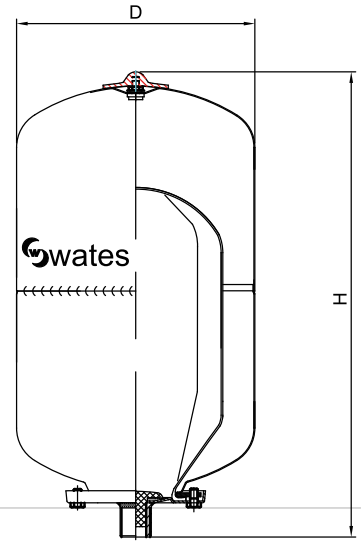
Membran Türü

Membrane type

Type de membrane

Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura	Model Model Modèle Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 10 S	2 LT	2	1"	120	242	WAT 10 S	50 LT	2	1"	380	620
WAT 10 S	5 LT	2	1"	160	300	WAT 10 S	50 LT	4	1"	380	750
WAT 10 S	8 LT	2	1"	202	320	WAT 10 S	60 LT	4	1"	380	810
WAT 10 S	12 LT	2	1"	280	300	WAT 10 S	80 LT	4	1"	460	915
WAT 10 S	19 LT	2	1"	280	430	WAT 10 S	100 LT	4	1"	460	990
WAT 10 S	24 LT	2	1"	280	470	WAT 10 S	150 LT	4	1"	500	1100
WAT 10 S	35 LT	2	1"	380	470	WAT 10 S	200 LT	4	1-1/4"	585	1120

* İstedığınız her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

Renk Seçenekleri

Color Available / Options de Color / Opciones de Color



10 Bar Paslanmaz Çelik Kapalı Genleşme Tankı Serisi

10 Bar Stainless Steel Closed Pressure Tank Series

Série de vases d'expansion fermés de 10 bars en acier inoxydable

Tanque de Expansion Cerrado de Acero Inoxidable (10 Bares)



Kapalı ısıtma sistemleri için değiştirilebilir membranlı genleşme tankı
Expansion tank with replaceable membrane for closed heating systems
Vase d'expansion a membrane remplaçable pour les systèmes fermés de chauffage
Tanque de expansion con membrana intercambiable para sistemas de calefacción cerrados

CE direktifi uyarınca işaretlenmiş
CE marked according to directive
Marqué conformément à la directive CE
Marcado de acuerdo con la directiva CE

PED 2014 / 68 / EU

Maksimum Çalışma Basıncı
Maximum working pressure
Pression maximum de service
Presion maxima de trabajo

10 BAR

Standart Önceden Belirlenmiş Basıncı
Standart pre-set pressure
Pression normale prédéterminée
Presion predeterminada estandar

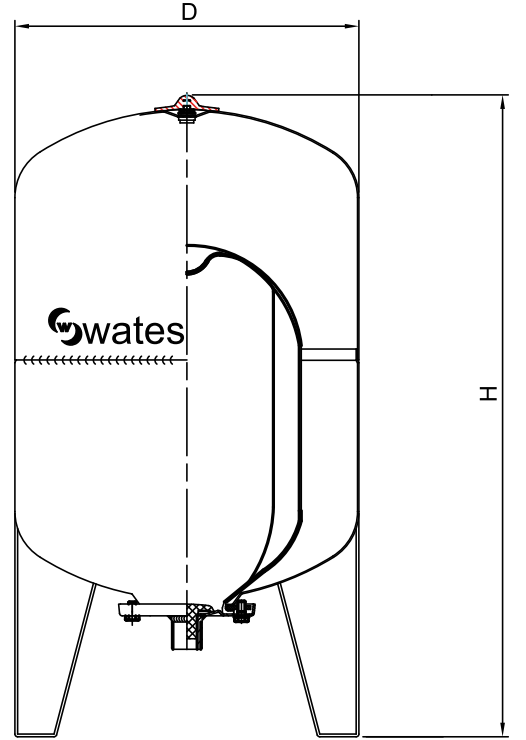
2 BAR

Çalışma Sıcaklığı
Working temperature
Température de fonctionnement
Temperatura de funcionamiento

-10 °C / +100 °C

Membran Türü
Membrane type
Type de membrane
Tipo de membrana

EPDM



Teknik Özellikler Technical Specifications

Spécifications Techniques Especificaciones Técnicas

Model Model Modelo	Hacim Volume Volume Volumen	Ön Gaz Basıncı Pre-Charge Pressure Prè-pression de Gaz Presion Previa	Bağlantı Connection Connexion Conexion	Çap Dia Diametre Diametro	Yükseklik Height Hauteur Altura
WAT 10 SS	24 LT	2	1"	280	470
WAT 10 SS	50 LT	4	1"	380	750
WAT 10 SS	60 LT	4	1"	380	810
WAT 10 SS	80 LT	4	1"	460	915
WAT 10 SS	100 LT	4	1"	460	990
WAT 10 SS	150 LT	4	1"	500	1100
WAT 10 SS	200 LT	4	1-1/4"	585	1120
WAT 10 SS	300 LT	4	1-1/4"	635	1230
WAT 10 SS	500 LT	4	1-1/4"	750	1550

* İsteddiğiniz her ürün paslanmaz flanş kapaklı ve butil membranlı olarak üretilebilmektedir.

Stainless steel flange and butyl membrane is available for all ranges.

Chaque produit que vous demanderez peut être fabriqué avec couvercle de bride en inox et membrane en butyle.

Cada producto solicitado por usted se puede producir con cubierta de brida inoxidable y membrana de butilo.

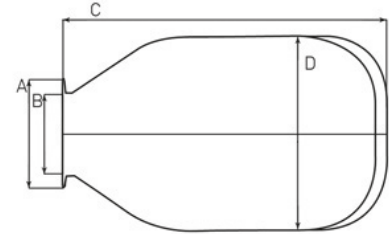
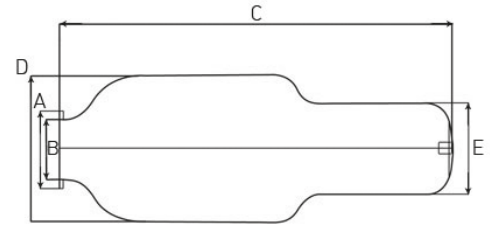
MEMBRAN

Membrane / Membrane / Membrana

Tek Flanşlı / Single Flange

Teknik Özellikler Technical Specifications
Spécifications Techniques Especificaciones Técnicas

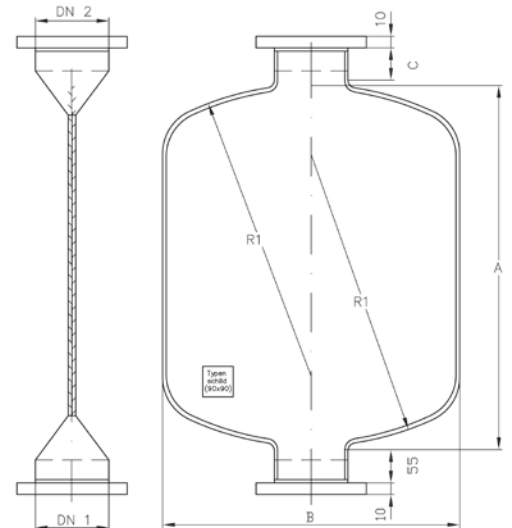
Boyut ve Kapasite Size and Capacity Dimensions et Capacité Tamano y Capacidad	Flanş Flange (B/A) Bride (B/A) Brida (B/A)	Yükseklik Height Hauteur Altura	Çap Dia Diametre Diametro
2-3 LT	45/65	135	80
5-8 LT	45/65	155	105
8-12 LT	45/65	200	115
12-18 LT	45/65	265	135
24 LT	80/100	260	200
35-50 LT	80/100	335	210
50-80 LT	80/100	500	220
35-50 LT With Tail	80/100	310+45	180
80-100 LT With Tail	80/100	640+130	200
80-100 LT	80/100	630	120/140
100-150 LT	80/100	730	180/270
150-200 LT	80/100	810	240/270
200-300 LT	150/200	1000	230/380
500-750 LT	150/200	1350	280/440
750-1000 LT	150/200	1800	340/470
1000-1500 LT	200/260	2100	420/500
2000-4000 LT	248/313	2560	405/780



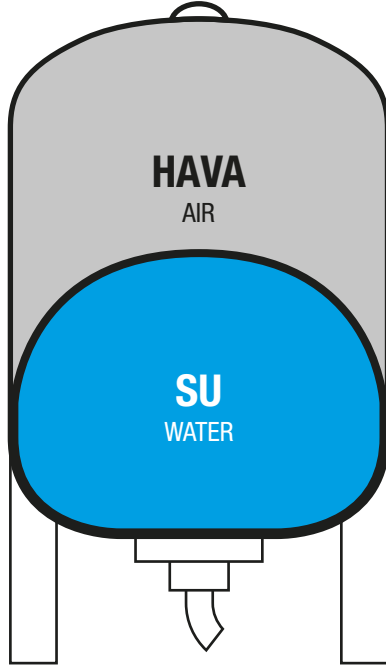
Çift Flanşlı / Double Flange

Teknik Özellikler Technical Specifications
Spécifications Techniques Especificaciones Técnicas

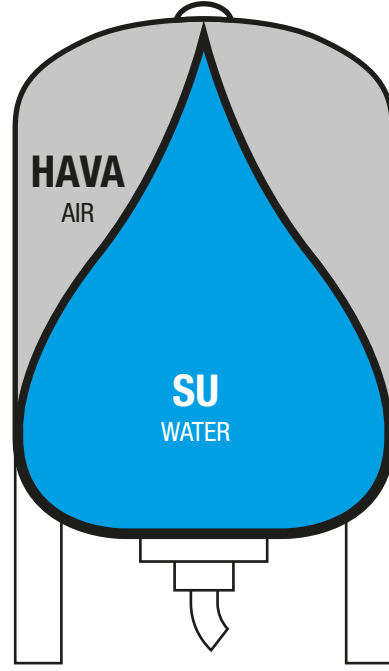
Boyut ve Kapasite Size and Capacity Dimensions et Capacité Tamano y Capacidad	Yükseklik Height Hauteur Altura	Çap Dia Diametre Diametro	DN1	DN1
5000 LT	3400	2250	150	250
6000 LT	4365	2100	150	250
7000 LT	4815	2100	150	250
8000 LT	5515	2100	150	250
10000 LT	5615	2100	150	250



MEMBRAN



ASKISIZ MEMBRANLI TANK
MEMBRANE TANK WITHOUT TIEROD



ASKILI MEMBRANLI TANK
MEMBRANE TANK WITH TIEROD

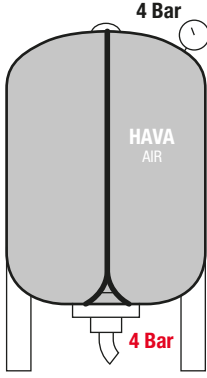
Kapalı Genleşme Depolarının Sistemde Kullanılmasının Faydaları;

- › Isıtma tesisatı kapalı sisteme döneceğinden hava ile teması bulunmayacak ve korozyon oluşmayacaktır.
- › Su sadece membranla temas eder ve bu nedenle korozyon oluşma olasılığı ortadan kalkacaktır.
- › Membranın değiştirilmesi kolaydır.
- › Duvara sürtmeyen membran, daha uzun ömürlü olacaktır.
- › Kapalı sistemde su buharlaşıp kaybolmayacağından, su eksilmesi olmayacaktır.
- › Kapalı sistemde basınç dağılımı eşdeğer olacağından, sistemde ısınma daha dengeli olacaktır.
- › Bir hava besleyici gereksinimini ortadan kaldırır.
- › Kapalı genleşme deposu ısıtma sistemine yakın montaj yapılabilir bu yüzden daha az enerjiye ve işçiliğe ihtiyaç vardır.
- › Montajı hızlı ve bakımı kolaydır.
- › Düşük maliyetli ve az yer kaplamasından dolayı yerden tasarruf edilir.

Benefits Of Using Closed Expansion Tanks In The System;

- › As the heating system returns to a closed system, there will be no contact with air and no corrosion will occur.
- › The water only comes into contact with the membrane and therefore the possibility of corrosion will be eliminated.
- › Replacing the membrane is easy.
- › The membrane that does not touch the wall will be used longer.
- › In the closed system, water will not evaporate and will not be lost.
- › Since the pressure distribution in the closed system will be equivalent, the heating in the system will be more balanced.
- › Eliminates the need for an air feeder.
- › The closed expansion tank can be installed close to the heating system, so less energy and labor is needed.
- › Assembly is quick and easy to repair. (maintain)
- › Closed expansion tank is low cost takes up little space.

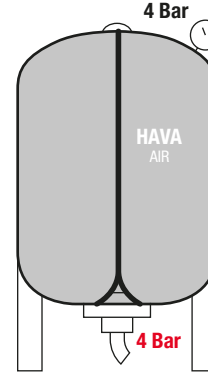
Kapalı Genleşme Depolarının Sistemde Kullanılmasının Faydaları;



1. Tank

Tank Sisteme Bağlanıyor

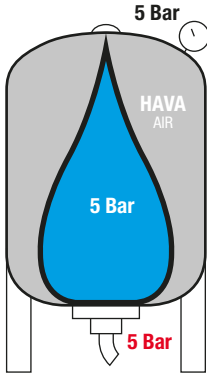
The tank is connected to the system



2. Tank

Pompa suyu basmaya başlıyor

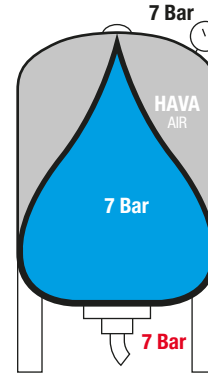
The pump start to pump water



3. Tank

Pompa suyu basmaya devam ediyor

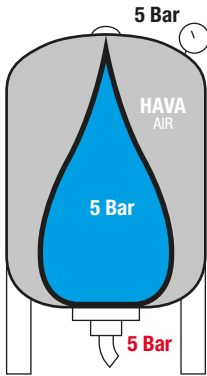
Pump continues to pump water



4. Tank

Çalışmakta olan pompa duruyor

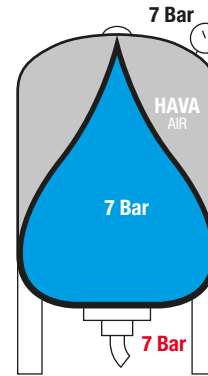
Pump in operation stops



5. Tank

Pompa çalışmıyor ve su tanktan boşaltılıyor

The pump does not start and water is drained from the tank



6. Tank

Durmakta olan pompa tekrardan çalışmaya başlıyor

The pump that is stopped is restarting

HEATING SYSTEM APPLICATION

Calculation of the Tank Volume

Tank volume (lt) can be calculated with the next formula.

V_{tank} : Expansion tank volume (lt)

V_{su} : Total water volume in the installation (lt)

e : Expansion coefficient of the heating water

P_{min} : Absolute static pressure of the water in installation (bar)

P_{max} : Max. absolute pressure that can be applied to the system. This is also the value for open the safety valve (bar).

$$V_{\text{tank}} = \frac{V_{\text{water}} \cdot e}{1 - \frac{P_{\text{min}}}{P_{\text{max}}}}$$

Calculation

Water :

The total volume of the water in the installation (lt). When the absolute calculation is difficult, the following table can be used.

TABLE: 1 RADIATOR WATER VOLUMES ACCORDING TO THE BOILER CAPACITY

Heating Element	Water Volume (lt) required for each 1000 kcal/hr	Water Volume (lt) required for each 1 kW
Convactor	6	5.2
Panel Radiator	9.7	8.33
Cast Radiator	14	12
Steel Radiator	14	12
Floor Heating	21.5	18.5

e : The expansion coefficient for the water heating from 10° to 90° is taken 0,0355 .

P_{min} : The absolute static pressure of the water in the installation where the expansion tank is connected. (1 m. building height: 1 mSS=0.1 bar)

P_{max}: Maximum absolute pressure that can be applied to the system. This is at the same time the value for opening the safety valve (bar).

Not: To make the tank selection without any calculation, Alarko Closed Expansion Tank Selection Table can be used.

Sample Calculation

Examp: What is the tank volume to be used in a building with 8 normal+1 basement storey using 450.000 kcal/hr capacity boiler and panel radiator? Safety valve opening pressure is set to 4 bar. The expansion tank is located next to the boiler at the basement.

The calculation of the total water volume in the system. For panel radiator, 9,7 coefficient is found from the Table 1. V_{water}=400.000 . 9,7/1000=3880 lt. Generally, the volume of the boiler and piping is neglectable as compared to the radiator volumes. However, an increase of 10 % of the radiator volumes can be considered for the boiler and piping system. V_{water}=3880+0,1. 3880=4268,00 lt

P_{min}: The absolute static pressure of the water in the installation where the expansion tank is connected. 8 storey +1 basement =9 storeysx3 m/storey =27mSS=2.7 bar (pressure difference)

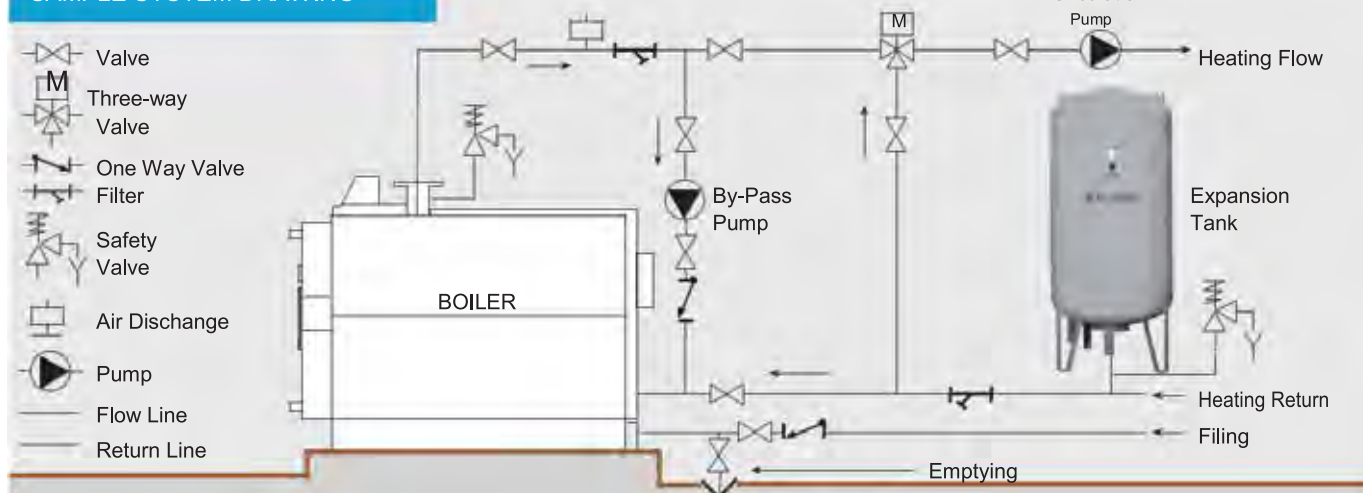
Absolute pressure=2.7 bar+1 bar=3.7 bar. P_{min}=3.7 bar.

e: The expansion coefficient for the water heating from 10° to 90° is taken =0.0355 . Maximum absolute pressure that can be applied to the system. This is at the same time the value for opening the safety valve, that is 4 bars. Absolute pressure=4 bar+1 bar=5 bar.

$$V_{\text{tank}} = \frac{V_{\text{water}} \cdot e}{1 - \frac{P_{\text{min}}}{P_{\text{max}}}} = \frac{4268,0 \cdot 0,0355}{1 - \frac{3,7}{5}} = 582,7 \text{ lt}$$

The closer tank volume bigger than this value is 750 lt. The correct selection should be GT 750.

SAMPLE SYSTEM DRAWING



WARNINGS

- ☒ The expansion tanks should absolutely be used with safety valve. Valve manufacturers inform about the utmost capacity with which their products are used. However, general the Table 2 can be used for this selection.
- ☒ There should not be any valve between the boiler, safety valve and expansion tank. ☒ The expansion tank should be adjusted so that the front pressure shall be (P_{min}) 0.1 bar lower than the minimum statically pressure of the system.
- ☒ The connection of the tank either to the flow or return pipe does not effect the selection of the tank.
- ☒ The expansion tank liquid is used with fuel or natural gas boilers. It is not used with coal boilers.

TABLE: 2

BOILER CAPACITY (kcal/hr)	SAFETY VALVE
Up to 45.000	1/2"
45.000-90.000	3/4"
90.000-175.000	1"
175.000-300.000	1 1/4"
300.000-500.000	1 1/2"
More then 750.000	2"

SANITARY SYSTEM APPLICATION

Calculation of the Tank Volume

$$V_{\text{tank}} = Q_{\text{max}} \frac{P_{\text{max}}}{3 \cdot \Delta P \cdot a}$$

Q_{max} : The maximum flow ratio given by pump to system. In case of new system installed, the maximum flow ratio needed by the building should be calculated from table 3 and table 4.
Maximum Required Flow Ratio= Daily Consumption (Table 3). Factor (Table 4) (lt/hr)

TABLE: 3 WATER CONSUMTION PER PERSON FOR SAMPLE LOCALITIES

LOCATION TYPE		DAILY CONSUMPTION PER PERSON (lt/person)
House	with washbasin	60-80
	with shower	80-115
	with bathtub	120-200
Hotel	with shower	100
	with bathtub	150-200
Hospital		200-500
School		5
Nursery		80-100
Kinder garden		100-150
Barracks		60-80
Restaurant		10-20
Garden Irrigation		1,5 lt/m ² at ones
Car Washing		100 lt/day

TABLE: 4 MULTIPLYING FACTOR FOR WATER CONSUMPTION PER PERSON

LOCATION TYPE		FACTOR
Houses	1-5 apartment	0.66
	6-10 apartment	0.45
	11-20 apartment	0.40
	21-50 apartment	0.35
	51-100 apartment	0.30
	100 apartment and more	0.25
Hotels	1-20 beds	0.40
	20-50 beds	0.40-0.30
	50 beds and more	0.30-0.20
Hastaneler	50-500 beds	0.30-0.20
	500-1000 beds	0.20-0.15
	1000-2000 beds	0.15-0.10
Schools		0.30
Nursery		0.40
Barracks		0.40-0.30
Business Centers		0.30

P_{max}: Maximum absolute pressure in the system. In domestic applications, it is enough to have the maximum pressure 2-3 bar higher than the minimum pressure.

P_{min}: Minimum absolute pressure in the system.

1,2 . (Static pressure Necessary pressure for caused by the + highest and farthest building height locality (for houses 1,5 bar))

ΔP: Pressure difference (P_{max}-P_{min}) (bar)

a : The maximum start up number of the pump motor (number of motor stop-operate in 1 hour). It is defined by the manufacturer of the pump. Generally, it is around 10-15.

Sample Calculation

Examp: A 6-storey and 48-room hotel shall drag water from its well with submersible pump and use in its installation. There stay maximum 96 persons in the hotel. What should the expansion tank selected be?

Q_{max}: Maximum flow ratio

Q_{max}=96 persons x 200 lt/person (Table 3) x 0,3 (Table 4)

Q_{max}5760 lt/hour

a: Let's take maximum reverse motion of the pump in an 1 hour =15.

P_{min}: 6 storeysx3 m/storey+5 m (basement)=23 m=23mSS=2 bar

P_{min} (indicator) =1,2 (2 bar+1,5 bar)=4,2 bar

Absolute pressure=4,2 bar+1 bar

P_{min}=5,2 bar.

P_{max}: Let's lower the maximum utilization pressure higher than the 3 bar.

P_{max}=5,2 bar+3 bar=8,2 bar

Pressure Difference=8,2-5,2=3 bar

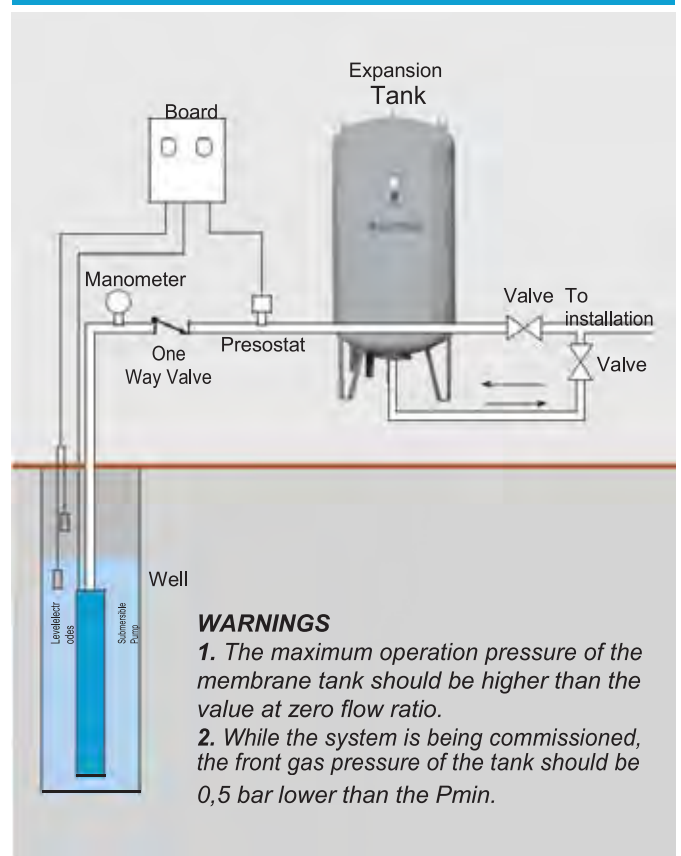
ΔP: ΔP=3 bar

$$V_{\text{tank}} = 5760 \frac{8,2}{3 \cdot 3 \cdot 15} = 345,60 \text{ litre.}$$

The standard tank volume bigger than this value is 500 lt. The correct selection should be GT 500.

Not : As can be seen from the example, the depth of the well is not important in this calculation.

SAMPLE SYSTEM DRAWING



YEDEK PARÇALAR

Spare Parts / Pièces de Rechange / Requestos

Membran Çalışma Kontrol Sensörü ve Basınç Ölçer
 Membrane Working Control Panel And Pressure Tranmlter
 Capteur de controle du fonctionnement de la membrane et jauge de pression
 Sensor Operativo de Membrana y Medidor de Presion



Manometre
 Manometer / Manomètre / Manometro

Beşyol
 5 Way Connection / Vanne a cinq voies
 Valvula de Cinco Vias

Basınç Saatleri
 Pressure Switch / Pressostats
 Interruptores de Presion



Ø50 Bağlantı 0-25 Bar
 Ø50 Connection 0-25 Bar



1" Giriş 1" Çıkış
 1" Connection 1" Outlet
 1" Entree 1" Sortie
 1" Entrada 1" Salida



Monofaze / Trifaze Mevcuttur
 Monofaze / Trifaze is Available
 Disponibles en Monophase / Triphase
 Momofasicos / Trifasicos Disponibles

Flanş Kapağı
 Counter Flange / Couvercle de Bride / Cubierta de Brida



Ölçüler Dimensions Dimensions	Galvaniz Galvanize Galvanizado	Boyalı Painted Pintado	Paslanmaz Stainless Steel Inoxydable Inoxidable	3/4"X	1"Y	1 1/4"X	1 1/2"X	2"X	2,5"X	3"X
Ø 140	S	-	O	O	S	O	-	-	-	-
Ø 240	O	S	O	-	-	S	O	S/O	-	-
Ø 300	O	S	O	-	-	-	O	S	O	O
Ø 380	O	S	O	-	-	-	O	-	S/O	S/O

YEDEK PARÇALAR

Spare Parts / Pièces de Rechange / Requestos

Membran Askısı

Membrane Hook / Suspente de Membrane / Colgador de Membrana



Kapasite Capacity Capacité Capacidad	Çap (D) Dia (D) Diametre (D) Diametro (D)	Yükseklik (H) Height (H) Hauteur (H) Altura (H)
80-500 LT	Ø65	60 mm
750-1000 LT	Ø70	60 mm
1500-2500 LT	Ø80	65 mm

Felix Bağlantı Hortumu

Flexible Hoses / Tuyau Flexible de Connexion / Manguera de Conexion Flexible

Bağlantı Connection Connexion Conexion	Boyutlar Size Dimensions Dimensiones
1"	50-150 cm
1 1/4"	50-150 cm



Bağlantı Connection Connexion Conexion	Boyutlar Size Dimensions Dimensiones
1 1/2"	50-150 cm
2"	50-150 cm

SERTİFİKALAR

Certificates / Certificats / Certificados



BELGE NUMARASI REFERENCE NUMBER OF LICENSE	049961-TSE-02/01
BELGENİN İLK VERİŞİŞ TARİHİ DATE OF FIRST ISSUE OF LICENSE	21.04.2020
BELGENİN SON GEÇERLİLİK TARİHİ LICENSE VALID UNTIL	21.04.2022
BELGE SAHİBİ KURULUŞUN ADI NAME OF THE LICENSE HOLDER	İSTANBUL GENİŞLEME VE HİDROFOR TANKLARI MAKİNE SANAYİ VE TİCARET ANONİM ŞİRKETİ
BELGE SAHİBİ KURULUŞUN ADRESİ ADDRESS OF THE LICENSE HOLDER	MUALLİMHİYY MAH. GAZİ DEDE CAD. NO:82 GEZBE KOCAELİ/TÜRKİYE
ÜRETİM YERİ ADI NAME OF THE MANUFACTURING PLACE	İSTANBUL GENİŞLEME VE HİDROFOR TANKLARI MAKİNE SANAYİ VE TİCARET ANONİM ŞİRKETİ
ÜRETİM YERİ ADRESİ ADDRESS OF THE MANUFACTURING PLACE	MUALLİM KÖY MAHALLESİ GAZİ DEDE CADDESİ NO:82 GEZBE KOCAELİ / TÜRKİYE
İPTAL EDİLEN BELGE NUMARASI (Versa) INDICATION OF SUPERSEDED LICENSE (if any)	
TECİLLİ TİCARİ MARKASI REGISTERED TRADE MARK	W WARETS
İĞİLİ TÜRK STANDARDI RELATED TURKISH STANDARD	TS EN 13831 / 09.11.2011
BELGE KAPSAMI SCOPE OF LICENSE	
WAT TİCARİ MODELİN EN YÜKSEK ÇALIŞMA BASINCI 25 BAR OLAN, SU TESİSATLARI İÇİN DİYAFRAMLI KAPALI GENİŞLEME TANKI	

e-imzal/e-signed

16.04.2021
Belgelendirme Merkezi Başkanı Adına
AKDOĞAN BULUT

TSE İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ V.

*Bu belge, belgelendirilen ürünün, üretim yerinin Eratlımızın belgediği şartları karşıladığını da gösterir.
*Bu belge, hiç bir suretle taahhüt edilemez, kararın yasa olmasına karşın zorlatıcılık beklenmektedir. **TESE İSTANBUL BELGELENDİRME MÜDÜRLÜĞÜ** * Adres: Çayyova Tene İstasyonu Yanı ÇAYIROVA/İSTANBUL * Telefon: 2627231273 * Faks: 262731606
*TESE İSTANBUL BELGELERİ MERKEZ BAŞKANLIĞI, Adres: Necatibey Cad. No:112 06100 Bakanlıklar/ANKARA - Telefon: 0 312 416 64 81 / 416 64 27, Faks:0 312 416 66 27 E-posta: tes@tesil.com.tr , web: www.tese.com.tr

<https://evrakkontrol.tse.org.tr/BelgeDogrulama.aspx?p=tc04a086> adresinden belgenin doğruluğuna ve geçerliğini sorgalayınız.



SERTİFİKALAR

Certificates / Certificats / Certificados





İstanbul genleşme ve Hidrofor Tankları

Makine San. ve Tic. A.Ş.

A. Muallimköy Mh. Gazidede Cd. No:82

Gebze Kocaeli, TR

T. +90 262 600 00 12

F. +90 262 600 00 14

M. info@wates.com.tr

W. www.wates.com.tr