

## Armaduras

**Hamilton** presenta su línea propia de armaduras para la instalación directa de sus sensores y electrodos de roscas compatibles. Las armaduras **Hamilton** presentan muchas peculiaridades frente a las demás presentes en el mercado.



**Protección del cable:** Todas las armaduras tienen una tapa protectora del cable, que evita el contacto con la suciedad ambiental, la humedad y posibles daños sobre el conector eléctrico al tirar del cable hacia el exterior de la carcasa.



**Características de seguridad:** El Masterfit presenta un mecanismo de despresurización para evitar la abertura de

### Retractofit

La Retractofit **Hamilton** es la armadura ideal para las aplicaciones industriales. La armadura permite al usuario instalar electrodos sin mantenimiento en los procesos críticos. El principal beneficio de esta construcción es que usted puede extraer la sonda de la línea de proceso, por ej. para limpiar, calibrar o incluso para cambiar el electrodo sin parar o distorsionar el proceso. Está diseñado para utilizar electrodos con 225 mm de longitud y rosca PG 13,5, por ej. los tipos Easyferm, Polilyte, Polyresist o Easycontrol.

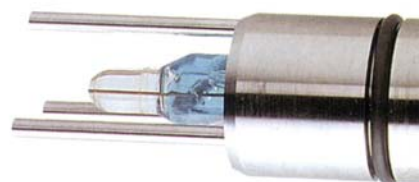
La armadura es muy fácil de usar y mantener. Sólo un botón es necesario para mover la sonda. Todas las arandelas se pueden cambiar fácilmente y sin herramientas especiales. Un cierre de seguridad especial imposibilita al usuario introducir la sonda en la línea de proceso sin un electrodo instalado, evitando así una conexión directa del tanque de proceso con el exterior. Cuando se extrae la sonda, el electrodo se coloca



la armadura con el sistema a presión. Además, el cilindro del cristal que contiene el electrodo está recubierto por un polímero que lo hace inastillable al romperse por sobrepresión.

Por otro lado, el Retractofit utiliza un sistema mecánico que impide la introducción de la sonda sin el electrodo instalado, con la posibilidad de que los productos de la tubería fluyan hacia el exterior.

**Protección integrada de la membrana:** Presente en toda la línea profesional de armadura Hamilton. Este diseño protege la membrana del electrodo de posibles golpes con sólidos presentes en la muestra; por ej. hielo, reactivos sin disolver... Para las armaduras Masterfit y Flexifit esta protección se consigue con 3 clavijas que permiten una buena turbulencia alrededor del electrodo instalado, y minimiza el riesgo de obturación. El Retractofit tiene una caja protectora alrededor del electrodo, hecha de acero inoxidable.



**Diseñadas para soportar los ambientes más duros:** Todas las partes sumergibles son de acero inoxidable (1.4571, UNE F.3535-X 6 CrNiMo Ti 17-12-03), los anillos de cierre son de Viton, el cable con tapón es de fibra reforzada con policarbonato. No obstante, si en algún caso se necesita mayor resistencia (acero con tántalo o Hastelloy), estas armaduras pueden fabricarse con estos materiales.

en una cámara para el electrodo. En esta posición, el electrodo puede guardarse mojado, lavarse o incluso calibrarlo sin desmontarlo de la armadura. Dos tubos conectores permiten el acceso a la cámara del electrodo.

#### Especificaciones:

Conexión Mecánica:	G 11/ 4"
Longitud Total:	316 mm (posición de medición) 400 mm (posición recogida)
Diámetro Máx.:	57 mm
Materiales Sumergibles:	Acero Inoxidable 1.4571 Viton™
Rango de Temperatura:	-10 ... + 130°C/ 14...266°F
Presión Máx.:	4 bar/ 59 psi
Long. Inmersión Máx.:	70 mm
Electrodos para Instalar:	Todos los electrodos con rosca PG 13,5 y 225 mm longitud

#### Información para pedidos:

Referencia	Descripción
H-237240	Retractofit Longitud de Inmersión 70 mm

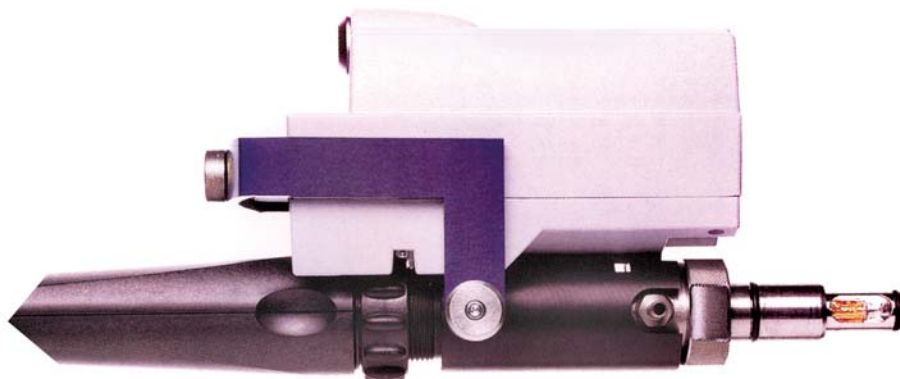


### Retractomatic

El Retractomatic es la versión motorizada del Retractofit. Disponen de un motor eléctrico que permite realizar los trabajos de mantenimiento y de calibración sin necesidad para detener los procesos en marcha. El Retractomatic puede ser controlado de muchas formas

desde un simple controlador de tiempos hasta con sistemas de control computerizados como PLCs. Al mismo tiempo puede incorporarse indicadores de posición del electrodo que activen bombas o válvulas externas que activen los procesos de limpieza y calibración. Utiliza electrodos de 225 mm.

Referencia	Descripción
HA-237260	Retractomatic



### Masterfit

En los procesos muy críticos o aplicaciones donde se necesita una gran precisión o estabilidad a largo plazo se precisan electrodos con electrolito líquido. Tales electrodos necesitan estar presurizados por encima de la presión del proceso para que fluya el electrolito hacia el exterior del electrodo. Sólo con este diseño se garantiza una medida perfecta. La armadura Masterfit hace posible instalar estos electrodos dentro de un tanque de proceso o un tubo de forma muy práctica. La armadura no utiliza ninguna junta de cierre que asegure la estanqueidad. Unos grandes visores permiten comprobar el nivel de electrolito del electrodo instalado. El manómetro integrado indica la presión aplicada y está protegido contra roturas. El cabezal de la armadura está provisto de una palanca que hace la abertura muy fácil. Al mover esta palanca se despresuriza lentamente la armadura, con lo que se evita la abertura bajo presión. Tres clavijas de acero inoxidable protegen la membrana del electrodo contra la rotura debida a componentes sólidos de la muestra.



La armadura Masterfit está disponible en diferentes longitudes de inmersión para su instalación dentro de reactores o en fermentadores con diferentes gruesos de pared (por ej. tipos de pared aislada o doble pared). Si usted necesita otras medidas que las descritas a continuación, o si está interesado en versiones especiales, por favor consulte a su distribuidor **Hamilton**.

Especificaciones:	
Conexión mecánica:	G 11/ 4"
Longitud total:	395 mm (de la armadura instalada)
Diámetro máx.:	60 mm
Materiales sumergibles:	Acero inoxidable 1.4571 Viton™
Rango de temperatura:	-10 ... + 130°C/ 14...266°F
Presión máx.:	6 bar/ 87 psi
Long. inmersión estándar:	70,100,150 y 200 mm
Electrodos a instalar:	Todos los electrodos con depósito de electrolito

Información para pedidos:	
Referencia	Descripción
H-237200	Masterfit 120 Longitud de inmersión 70 mm
H-237225	Masterfit 150 Longitud de inmersión 100 mm
H-237235	Masterfit 200 Longitud de inmersión 150 mm

### Retractomaster

Aconsejables en los procesos que necesiten electrodos con electrolito líquido con frecuente mantenimiento o recalibración.

El Retractomaster permite montar estos electrodos en un reactor con un anclaje soldado y poder exponer y esconder el cabezal del electrodo sin detener el proceso industrial para limpiar o calibrar el electrodo. Es una armadura equivalente al Masterfit pero con la mecanización del Retractofit. Utiliza electrodos presurizados tipo Chemotrode.



Referencia	Descripción
HA-237250	Retractomaster

### Flexifit

La armadura Flexifit es la elección correcta para las aplicaciones industriales estándar. Está diseñada para la instalación de electrodos de 120 mm con rosca PG 13.5, tanto los tipos de pH, redox como de oxígeno. Se monta fácilmente sobre las tomas soldadas en las tuberías y las arandelas de Viton™ pueden cambiarse sin ninguna herramienta especial. El práctico cable con tapón protege la conexión eléctrica de la suciedad y la humedad.

Para el Flexifit está disponible un adaptador que proporciona un sistema de flujo a través de cubera para aplicaciones industriales. Por favor, consulte con su distribuidor **Hamilton**.



#### Especificaciones:

Conexión mecánica:	G 11/ 4"
Longitud total:	215 mm
Diámetro máx.:	57 mm
Materiales sumergibles:	Acero inoxidable 1.4571 Viton™
Rango de temperatura:	-10 ... + 130°C/ 14...266°F
Presión máx.:	6 bar/ 87 psi
Long. inmersión estándar:	70 mm
Electrodos para instalar:	Todos los electrodos con rosca PG 13,5 y longitud 120 mm

#### Información para pedidos:

Referencia	Descripción
H-237220	Flexifit. Longitud de Inmersión 70 mm

### Accesorios

#### Accesorios de instalación

El anclaje soldado es la base de la instalación de todas las armaduras. Hecho de acero inoxidable, se suelda fácilmente al reactor, fermentador o tubería. Debido al diseño especial, la armadura se encaja perfectamente a su diámetro interno después de soldarse, lo cual es importante para asegurar un correcto cierre de la arandela de la armadura. El anclaje tiene un ángulo de instalación de 15°, lo que permite una óptima y flexible instalación.



Referencia	Descripción
H-237202	Anclaje soldado

#### Kits de servicio

El kit de servicio contiene todos los recambios necesarios y herramientas para el mantenimiento de armaduras y sensores.

Referencia	Descripción
H-237219	Kit de servicio para el Flexifit
H-237229	Kit de servicio para el Masterfit
H-237239	Kit de servicio para el Retractofit y Retractomaster
H-237290	Kit de servicio para el Retractomatic

### Sensores de oxígeno disuelto

#### Oxyferm

El nuevo sensor de oxígeno disuelto Oxyferm asegura un funcionamiento seguro, con bajo mantenimiento y larga vida, incluso después de repetidas esterilizaciones en las aplicaciones biotecnológicas.

La clave de un buen sensor de oxígeno es la membrana utilizada que permite la permeabilidad del oxígeno a su través. Generalmente, se utiliza una fina membrana, pero este diseño no soporta bien las esterilizaciones repetidas. Hamilton ha desarrollado una nueva membrana para ello: la membrana Optiflow. Consiste en una membrana de doble capa reforzada con una malla de acero. Por tanto, es capaz de soportar alta presión, pero manteniendo una alta velocidad de difusión y cortos tiempos de respuesta.



# Standard Armatures

## FLEXIFIT VV

The FLEXIFIT VV is an armature suitable for Tuchenhagen VARIVENT sanitary process connections (DN40/DN50 or 2"/2.5"). It fits industrial sensors with a standard 12 x 120 mm design and PG 13.5 thread. FLEXIFIT VV-0 is the upright (0°) version, whereby the sensor is fitted perpendicular to the process connection. The 15° version FLEXIFIT VV-15 enables positioning of the sensor in relation to the flow.



Name	Order No.
FLEXIFIT VV-0	237 344
FLEXIFIT VV-15	237 345

## FLEXIFIT TC

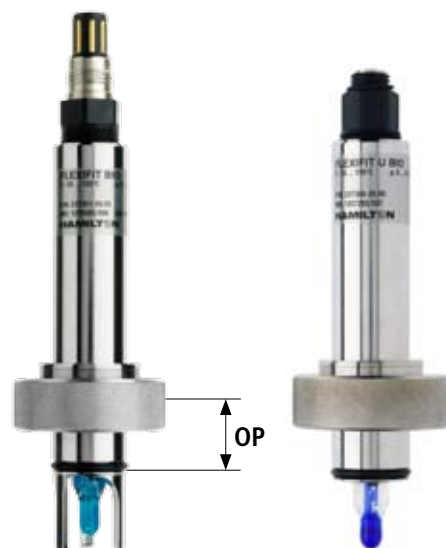
The FLEXIFIT TC is an armature designed for mounting on TriClamp process connections. The materials used are stainless steel DIN 1.4435 (SS 316L) and FDA approved EPDM o-rings. Steam sterilization, autoclavation and CIP cleaning are possible with the sanitary design. The short immersion depth makes this armature perfect for small flow-through cells. Maintenance-free sensors with a standard 12 x 120 mm design and PG 13.5 thread fit perfectly.



Name	Order No.
FLEXIFIT TC150-33	237 341

## FLEXIFIT BIO, FLEXIFIT U BIO

The FLEXIFIT BIO armature provides the best of both worlds. It is the right compromise between good sensor protection (with 3 protection rods) and good sanitary design (easy cleaning). To achieve an even better cleanability the FLEXIFIT U BIO lacks the protection rods. FLEXIFIT BIO and U BIO are manufactured from stainless steel DIN 1.4435 (SS 316L). The surface quality is N5 (Ra = 0.4 μm), electro-polished. The EPDM o-rings are FDA-approved. The armature comes with a material certificate. It is SIP, autoclavable, and CIP compatible.



Name	Order No.
FLEXIFIT BIO (o-ring seals at OP; 22 mm < OP < 55 mm)	237 331-OP
<b>Accessories:</b>	
Service Kit Flexifit (Viton o-rings)	237 219
Service Kit Flexifit Bio (EPDM)	237 366
Service Kit Kalrez	237 319
Weld-in socket (page 41)	

# Pressurizable Armatures

## MASTERFIT

This armature is suitable for applications where high accuracy or long-term stability is required in conjunction with liquid electrolyte electrodes. Such electrodes must be pressurized to ensure flow of the electrolyte solution.

The MASTERFIT armature allows electrodes to be mounted on pipe work or tanks with a weld-in socket. Large windows allow visual inspection of the electrolyte level in the installed electrode. The manometer integrated into the housing is protected against physical damage. The armature closure mechanism is fitted with a tension lever that allows a slow release of the pressure in the armature in the event it needs to be

opened. This prevents the armature from being opened under pressure. The tension lever also makes it very easy to unscrew the housing and remove the sensor.

### Advantages:

- Sealing feature prevents loss of pressure caused by soiling
- Pressure reduction on disassembly
- O-ring position selectable at time of order without extra charge



Name	Order No.
MASTERFIT 120	237 200-OP
MASTERFIT 150	237 225-OP
MASTERFIT 200	237 235-OP
Pressure connector	237 252
Service Kit Masterfit	237 229
Kalrez Kit Masterfit	237 319

# Retractable Armatures



## RETRACTOFIT, RETRACTOFIT PEEK

The HAMILTON RETRACTOFIT is an ideal armature for industrial applications. The armature allows the user to install maintenance-free electrodes in critical processes. The main advantage of this design is that the sensor can be withdrawn while the process is running (i.e. for cleaning, calibration or even to replace the electrode), without interrupting the process. The design allows the use of sensors with 210 to 225 mm shaft length and a PG 13.5 thread, e.g. electrodes such as the EASYFERM Plus 225, MECOTRODE 225, OXYGOLD G 225 and VISIFERM™ DO.

The armature is very easy to use and maintain. Only one press of the red button is needed to move the electrode into or out of the process. All o-rings are easily replaced without special tools.

An integral safety mechanism prevents the armature from being inserted into the sample without an electrode installed. This prevents an open connection between the inside of the process vessel and the external environment. In the retracted position, the electrode is retained in a chamber where it can be kept moist, cleaned and even calibrated. This can all be done without process interruption or disassembly of the armature. Two tube connectors allow access to the rinsing chamber.

Two accessories are available for the RETRACTOFIT. A shortened insertion tube that allows use of the armature in narrow-bore pipes for which the standard insertion tube is too long. A closed insertion tube converts the RETRACTOFIT into a sampling system for diverse applications. Both accessories can easily be exchanged for the standard insertion tube using only gentle hand pressure.

The RETRACTOFIT BIO on page 45 is the sanitary designed version for biotechnology and food applications.

### Advantages:

- One-hand operation
- Insertion is only possible with an electrode installed
- Electrode cannot be removed when in measurement position
- Visual check of o-rings
- Longer sensor life due to 225 mm sensor length

### RETRACTOFIT PEEK:

All steel parts constantly exposed to the process are replaced with PEEK. This allows the holder to be used with highly corrosive media providing the calibration chamber is thoroughly rinsed after retraction.



Name	Order No.
RETRACTOFIT	237 240
RETRACTOFIT PEEK 25	237 490
RETRACTOFIT PEEK 38.5	237 460

### Accessories:

Weld-in socket (page 40)	
Service Kit RETRACTOFIT	237 239
Kalrez Kit RETRACTOFIT	237 339
Insertion tube short	237 255

# Retractable Armature, Sanitary Version

## RETRACTOFIT BIO

The HAMILTON RETRACTOFIT BIO is an armature designed for applications where sanitary concerns are critical. The armature is steam-sterilizable and autoclavable. The stainless steel DIN 1.4435 (SS 316) and the FDA-approved EPDM o-rings withstand typical CIP cleaning.

The main advantage of this armature is that the sensor can be withdrawn while the process is running (i.e. for cleaning, calibration or even to replace the electrode), without interrupting the process. The design allows the use of sensors with 210 to 225 mm shaft length and a PG 13.5 thread, e.g. sensors such as the HAMILTON EASYFERM Food 225, POLILYTE HTVP 225, EASYFERM Plus 225 and OXYFERM 225.

The armature is very easy to use and maintain. Only one press of the red button is needed to move the electrode into or out of the process. All o-rings are easily replaced without special tools.

An integral safety mechanism prevents the armature from being inserted into the sample without an electrode installed. This prevents the risk of open connection between the inside of the process vessel and the external environment. Two leakage detection openings indicate seal failures during operation.

In the retracted position, the electrode

is retained in a chamber where it can be kept moist, cleaned and even calibrated. This can all be done without process interruption or disassembly of the armature. Two tube connectors allow access to the rinsing chamber.

The RETRACTOFIT on page 44 is designed for applications in the chemical and waste water industry.

### ATTENTION:

Check with your dealer for the right o-ring position or weld-in socket!

### Advantages:

- Autoclavable
- One-hand operation
- Various leakage indicators
- Longer sensor life due to 225 mm sensor length
- Insertion is only possible with an electrode installed
- No removal of sensor when in measurement position



Name	Order No.
RETRACTOFIT BIO 55 (o-ring seals at OP = 55mm)	237 440
RETRACTOFIT BIO 25 (o-ring seals at OP = 25mm)	237 480
<b>Accessories:</b>	
FDA Service Kit	237 338
Weld-in socket (page 41)	

# Pneumatically Powered Retractable Armature

## RETRACTEX™ Concepts

### The RETRACTEX™ Family Concept

By consequent standardization HAMILTON managed to realize a modular system for a pneumatically powered retractable armature. Therefore, the money spent to buy a RETRACTEX™ armature is well invested, even if the measurement station is changed, because only the process connection module has to be replaced in this case.

RETRACTEX™ armatures can be equipped with sensors that have a PG 13.5 thread, 12 mm shaft diameter and a shaft length of 225 mm. Compared to 120 mm sensors the increased electrolyte volume significantly increases the life span of the reference. Thus not only the electrode consumption is lowered, but also the zero point drift of 225 mm sensors is slower. Furthermore, the 225 mm sensors allow for a very compact construction.

### Asset protection and simple maintenance by modularity

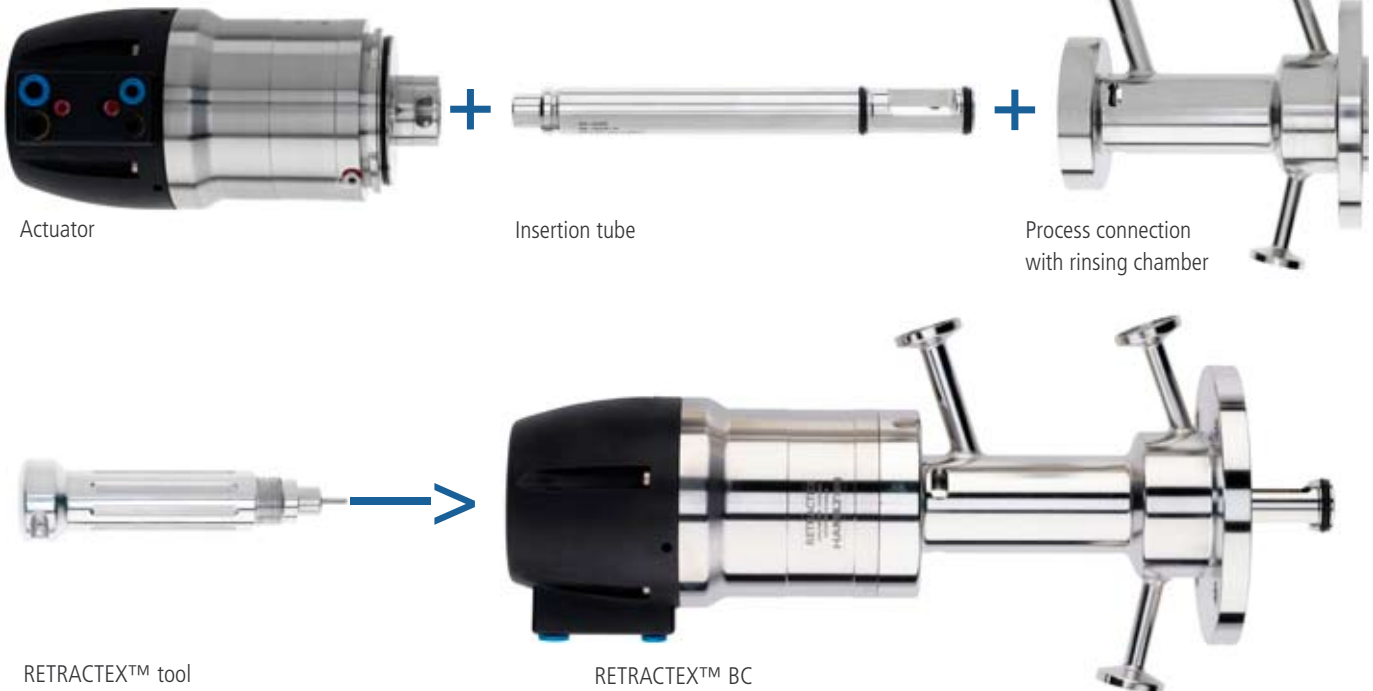
The actuator is the same for all RETRACTEX™ armatures, and you can even continue to use it if you change the process connection from DIN flange to BioConnect for example. The insertion tube is locked into the actuator. The orientation of its 'sensor window' can not be twisted to the actuator or the cleaning chamber. Therefore, by simple twisting of the RETRACTEX™ armature, the sensor can either be exposed to the main flow or be protected from it. This can be useful in pipes, if the process medium contains abrasive solids which may harm the glass membrane. On the other hand, for use under hygienic conditions a good fluid circulation around the sensor is essential for good cleaning in place.

### The pneumatic actuator

The actuator is the core of the RETRACTEX™-family. It is compact, light but nevertheless very resilient mechanically. Its connection panel makes it easy to correctly connect the air hoses that are needed to run RETRACTEX™. There will not be much confusion because the pneumatic connections are systematically size and color coded. If the armature goes from the rinsing to the measuring position and back, HAMILTON's SOFTDRIVE™ function comes into operation: The change of the position only takes a split-seconds. During the last millimeters of the movement RETRACTEX™ brakes. This way, the expensive sensors are moved softly and smoothly from one position to the other.

The RETRACTEX™ construction kit:

Simply put together:





# The RETRACTEX™ family

## Assembly of the seals

Some users prefer o-rings on the inside because they are better protected from process medium, others prefer o-rings on the outside that can be easily replaced and inspected visually. HAMILTON offers both with the RETRACTEX™ family concept.

In the chemical industry version the o-rings are assembled on the inside, and protected by a deflector. Additionally, the integrated blocking water function keeps particles away while the sensor is moving.

In the hygienic version, the o-rings which are assembled at the outside can be easily inspected and exchanged to avoid potential contaminations and to ensure sterility.

Size doesn't matter, just quality does



Size comparison between RETRACTEX™ and the product of a competitor (gray)


## The rinsing chamber

Another component of RETRACTEX™ armatures is the hygienically designed rinsing chamber with integrated process connection. In the "chemical" version RETRACTEX C™, the rinsing chamber and process connection can be separated from each other. Thus the same rinsing chamber can be used with various process connections.

Actuator, insertion tube and rinsing chamber can be disassembled and assembled within seconds. The only tool you will need for this is the RETRACTEX™ tool included in the package. All gaskets and the general state of the rinsing chamber can be checked quickly.

## Safety is paramount!

HAMILTON included a huge bundle of safety features into the RETRACTEX™ armature family to prevent accidents:

1.  Personnel and facility safety: TÜV Rheinland confirmed that RETRACTEX™ armatures can be used without risk in ATEX-relevant ambience of category 1 to 3 (zone 0 to 2) because the armatures do not contain ignition sources.
2. Design tests: During and at the end of development intense tests were performed to assure trouble-free running of RETRACTEX™.
3. Risk assessment: As part of the HAMILTON design standards a risk analysis was performed to detect and eliminate potential weaknesses.
4. Personnel safety: Only when the sensor is entirely screwed into the armature, it can be moved into the process. That way no process media can escape uncontrolled if someone accidentally tries to move a sensorless armature into the process.
5. Protection of the process: Even if the sealing of the actuator is broken no compressed air will get into the process.
6. Protection of the drive: If a seal in the wetted part of the armature is broken, no process- or rinsing media will get into the pneumatic head or into the pneumatic control.
7. Protection of the sensor: The position of the sensor window is fixed, so the sensor can be either exposed to the flow or protected from it by twisting the insertion tube.
8. Protection from user error: The size and color coded pneumatic connectors assure the right hose system is applied - even in hectic times.
9. Sterility: Because of the intelligent cleaning concept fast heating and cleaning of the sensor is achieved. A further innovation is the patent protected HyCIP™ process connection. This allows the gap between armature and 25 mm weld-in socket to be cleaned and sterilized, and the entire rinsing chamber to be heated faster, because the cleaning agent enters the rinsing chamber at optimal spots.
10. Autoclavation: All medium contacted parts can be dismounted from the actuator within seconds and then autoclaved. The armature can be safely re-assembled at the same speed.
11. Hygienic Design: The RETRACTEX™ armatures were designed with the recommendations of the EHEDG in mind. Furthermore, this design offers advantages in rough and very dirty applications.
12. Cleanability: Cleanability tests with installed pH sensors and sticky contaminations confirm the unmatched cleanability of RETRACTEX™. This was achieved by applying the cleaning solution from optimally placed locations and through complete flow around the relevant seals.

# RETRACTEX™ for hygienic processes

## RETRACTEX™

### Hygienic design versions

HAMILTON invested a lot to meet the high hygienic requirements of biotechnology and food and beverages industry. As a result, RETRACTEX™ is the pneumatic retractable armature closest to perfection for these application areas, and due to its various process connections it can be used with all vessels used in these industries.

### More sterile safety and unique cleaning efficiency with HyCIP™

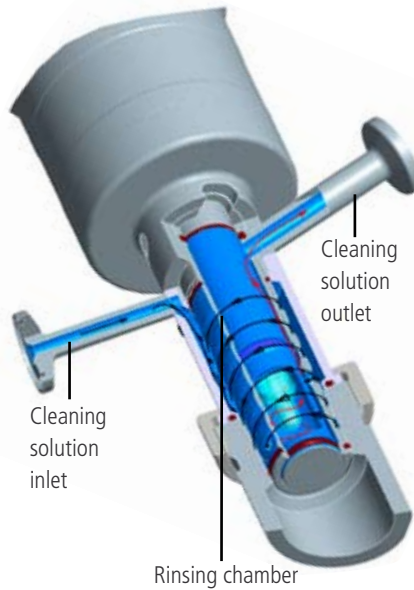
We would like to highlight the patent-protected HAMILTON HyCIP™ process connection for the widely used 25 mm weld-in sockets. This process connection has proven its value in general, but it leads to sterility problems time and again.

Frequent reasons for these sterility problems are:

a) Grooves at the inside of the socket that are a result of mounting and dismounting armatures with protection pins. The o-ring may still seal despite the grooves, but it is not a sterile barrier between the inside of a fermenter and the germ infested outside. Frequently, the upper part of the socket provides excellent growing conditions for germs.

b) Deformations of the socket's inner diameter (loss of circularity) that can occur when welding in the socket. The consequence is the same as the grooves described above.

The HyCIP™ solution is a huge improvement because the interior of the socket itself is sterilized. This is achieved by a second o-ring that seals at the outer side of the socket and by the sterilization of the resulting interspace. The HyCIP™ process connection leads the steam or cleaning solutions spirally through this interspace for optimal cleaning. The whole socket quickly reaches the temperature required for sterilization, creating an additional sterile area.



RETRACTEX™ HyCIP™ cleaning: Flow of the cleaning solution through the rinsing chamber

Furthermore, HyCIP™ process connections offer another advantage: If the sensor is in cleaning position, it can be cleaned and sterilized together with all medium contacting seals. In the HyCIP™ connection the cleaning solution is directed between armature and socket up to the process seal so the most remote parts of the chamber are rinsed. Thus HyCIP™ armatures are unmatched for their cleaning performance of the sensor and of all relevant seals.



RETRACTEX™ HyCIP with sensor and cable



RETRACTEX™ HyCIP process connection

# RETRACTEX C™ for aggressive media

## RETRACTEX C™

The chemistry version with blocking water feature

As opposed to biotechnology, in the chemical industry other properties are needed: Safe positioning and movement of the armature even if the media are sticky, trouble-free operation despite solids in the process medium, protection of the sensor if installed into pipes, resistance to corrosion, robust adaptations with flanges and safe operation in explosive areas. With RETRACTEX C™ armatures HAMILTON offers a whole range of features to meet these criteria. For example, the optional blocking water function rinses the media contacted seals and the sensor with water during position changes. This also prevents process water from getting into the rinsing chamber.

The insertion tube keeps its orientation when mounted, the sensor is protected by the slipstream of the insertion tube. Various medium contacted materials like PVDF, PEEK, Alloy C 22 or stainless steel DIN 1.4571 and the eligible seals made of EPDM, FPM/FKM or Kalrez® allow operation under extreme conditions.



RETRACTEX C™ with steel flange



The TÜV confirms: RETRACTEX™ does not have internal ignition sources and thus can be used safely in potentially explosive areas.

## Accessories for RETRACTEX™



1. MiniClamp adapter
2. MiniClamp
3. EPDM o-ring (TC3/4")



RETRACTEX™ with MiniClamp adapter

## Ordering information

Name	Order No
RETRACTEX™ HyCIP 25	242 220-25*
RETRACTEX™ HyCIP 50	242 220-50*
RETRACTEX™ HyCIP 55	242 220-55*
RETRACTEX™ TC 200 (2" Triclamp)	242 230
RETRACTEX™ VV (Varivent N)	242 240
RETRACTEX™ BCI40 (BioConnect DN40 ISO-V)	242 250
RETRACTEX™ BCD40 (BioConnect DN40 DIN-V)	242 260
RETRACTEX C™, Plastic flange**	242 671
RETRACTEX C™, Steel flange**	242 672

### Accessories:

MiniClamp adapter to connect up the rinsing chamber (TC3/4" zu G1/4")	242 276
MiniClamp	242 218
MiniClamp seal made of EPDM (TC3/4")	242 217
Service Kit Retractable HyCIP EPDM (FDA, USP class VI)	242 281
Service Kit Retractable HyCIP FPM (Viton)	242 282
Service Kit Retractable HyCIP Kalrez (FDA)	242 283
Service Kit Retractable TC/VV/BC EPDM (FDA, USP class VI)	242 286
Service Kit Retractable TC/VV/BC FPM (Viton)	242 287
Rinsing chamber HyCIP	242 296-OP
Rinsing chamber TC 200	242 297
Rinsing chamber VV	242 298
Rinsing chamber BCI 40	242 219
Rinsing chamber BCD 40	242 299
RETRACTEX tool	242 231

\* 25, 50, 55 = Standard o-ring positions

\*\* With various flange types and o-ring materials available on request

# Technical Data: Armatures

	RETRACTOFIT	RETRACTEX™	RETRACTEX™ C	MASTERFIT	HYGIENIC SOCKET™
Process connection	G 1 1/4"	various (view p. 48)	various (s. S. 48)	G 1-1/4"	PG 13.5
Minimum length	420 mm	various	various	various (view p. 41)	107 mm
Maximum length	450 mm	various	various	various (view p. 41)	128.5 mm
Maximum diameter	70 mm	various	various	60 mm	28 mm
Sensor insertion depth	70 mm	various	various	70 mm	various (view p. 38)
Armature insertion depth	105 mm	various	various	80 mm	various (view p. 38)
Material	SS 316L/DIN 1.4571	SS 316L/DIN 1.4435	various	SS 316L/DIN 1.4435	various (view p. 39)
Standard seals	VITON	EPDM (USP class VI)	various	FDA-EPDM	FDA-EPDM
Temperature range	-10...+130°C	-10...+140°C	-10...+140°C	-10...+130°C	-10...+140°C
Maximum pressure	6 bar	10 bar	10 bar	6 bar	14 bar
Weight	1350 g	ca. 3.0 kg	ca. 3.0 kg	1400 g	350 g
For sensors with	12 mm PG 13.5	12 mm PG 13.5	12 mm PG 13.5	30 mm standard	12 mm PG 13.5
Sensor shaft length	a = 225 mm	a = 225 mm	a = 225 mm	various	a = 120 mm
Catalog page	44	48	48	43	38

	FLEXIFLOW SL 10	RETRACTOFIT BIO	FLEXIFIT VV	FLEXIFIT TC	FLEXIFIT BIO
Process connection	Swagelok 10 mm	G 1-1/4"	Varivent	TriClamp 1.5"	G 1-1/4"
Minimum length	175 mm	366 mm	100 mm	133 mm	133 mm
Maximum length	175 mm	443 mm	100 mm	133 mm	133 mm
Maximum diameter	65 mm	70 mm	85 mm	50.5 mm	50 mm
Sensor insertion depth	—	70 mm	30 mm	32 mm	various
Armature insertion depth	—	132 mm	2 mm	33 mm	various
Material	SS 316L/DIN 1.4435	SS 316L/DIN 1.4435	SS 316L/DIN 1.4435	SS 316L/DIN 1.4435	SS 316L/DIN 1.4435
Standard seals	FDA-EPDM	FDA-EPDM	FDA-EPDM	FDA-EPDM	FDA-EPDM
Temperature range	-10...+130°C	-10...+135°C	-10...+135°C	-10...+135°C	-10...+135°C
Maximum pressure	16 bar	6 bar	6 bar	6 bar	6 bar
Weight	1200 g	1840 g	950 g	490 g	490 g
For sensors with	12 mm PG 13.5	12 mm PG 13.5	12 mm PG 13.5	12 mm PG 13.5	12 mm PG 13.5
Sensor shaft length	a = 120 mm	a = 225 mm	a = 120 mm	a = 120 mm	a = 120 mm
Catalog page	42	45	42	42	42