

A FLEXIBLE SOLUTION FOR EVERY CHALLENGE

Products catalog



TO LIFT



TO STORE



TO PLUG



TO SECURE



PRONAL

An industrial SME for more than 63 years, PRONAL is constantly working to create and improve the design of their state of the art flexible and/or inflatable structures made from Elastomers, Plastomers.

Our products range from flexible storage and transportation tanks, flexible lifting bags, seals, membranes, lifting cushions, pipe stoppers, grippers, compensators, aircraft lifting cushions and numerous products made to custom design.



A GLOBAL PRESENCE

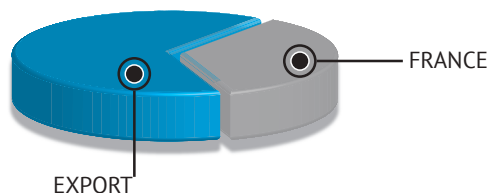


Registered office and subsidiaries



Agents or representatives

70% of total turnover goes to export

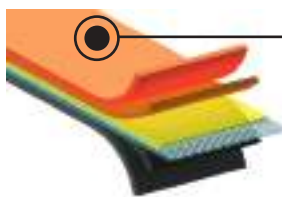


THE CORE OF OUR BUSINESS : the concept of flexibility

Since 1961, PRONAL has been producing technical flexible products - both standard and custom-designed - made from fabrics coated with elastomers, plastomers and composite materials.

PRONAL's development strategy is underpinned by 3 key priorities :

- **INNOVATION**
Uncreasing innovation in the fields of materials and technologies, with the constant goal of enhancing their performance.
- **DIVERSIFICATION**
Product diversification centred on the concept of flexibility.
- **QUALITY**
Quality maintained at all levels, with constant attention to customers' needs.



- Lightness
- Impermeability
- High traction strength
- Flexibility
- Elasticity
- Resistance to climatic conditions, abrasion and perforation

Solutions for your every need :

- 1 LIFTING
- 2 STORAGE
- 3 PLUGGING
- 4 SECURE
- 5 SEPARATING

1



2



3



4



5



Our Assets

➤ CUSTOM DESIGNED AND INNOVATIVE PRODUCTS tailored to your needs



Listening, understanding, innovating

Our experts analyze your specific needs and deliver innovative and customized solutions.

- Dedicated Research & Development teams
- A highly skilled engineering and design office
- Use of state-of-the-art software
- Over 100,000 products made to date



➤ A STATE-OF-THE-ART PRODUCTION FACILITY for customised solutions

Assembling, vulcanising, welding

- Our people possess outstanding technical and industrial know-how in the concept of flexibility
- Our technical fabrics are consistently maintained at the highest quality, from design right through to deployment.
- We have innovative and efficient means of assembly : vacuum, high-temperature vulcanization, high-frequency welding, cutting machine etc.

Installing, training and advising

- Work site coordination during installation
- On-site installation assembly
- Servicing, maintenance and assistance
- Training





- Buoyancy equipment for jacket installation
- Equipment for grouting operations for fixed platforms
- Subsea hyperbaric welding operations
- Repairs on damaged caisson
- Stoppers and underwater structures for salvage & de-commissioning operations
- Subsea storage

- Permanent or transportable bladders
- Flexible tanks for water storage
- Flexible tanks for hydrocarbons storage
- Pumping system for logistic & refuelling operations



Our global market



- Flexible tanks for temporary storage (chemical effluents, fire protection, ...)
- Plugs (Security & Foreign Material Exclusion, Inspection, Antipollution, Repair & isolation...)
- Volume compensator
- Earthquake solutions
- Contingency measures



- Drinking water supplies & water purification unit
- Level sensor



- Aircraft recovery cushions
- Embebbed bladders
- Additionnal bladders
- Composite for aircraft & helicopters
- Aircraft stabilization
- Lifting sling set
- Ground reinforcement
- Towing & debogging
- Weight management and defueling & refueling system
- Ground mat
- Protective foam blanket



AERONAUTIC

Global kets

CONSTRUCTION ONMENT



INDUSTRY ENGINEERING



- Pneumatic lifting bags
- High pressure lifting bags
- Low pressure lifting bags
- Hydraulic compensators
- Pneumatic palletisers
- Gap fillers
- Volume compensators



- Flexible tanks for storage (water, effluents, hydrocarbons, ...)
- Pipe plugs
- Gas holder
- Inflatable trench shield : Smartshore ®
- JB Qualifix ® manhole formwork
- Wall Formwork

Editorial

Whether working onsite or off, PRONAL recognizes the day-to-day problems operation workers face in addition to their normal activities, including :

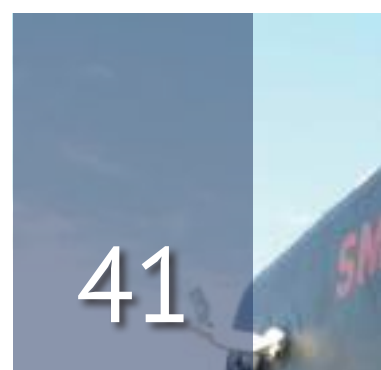
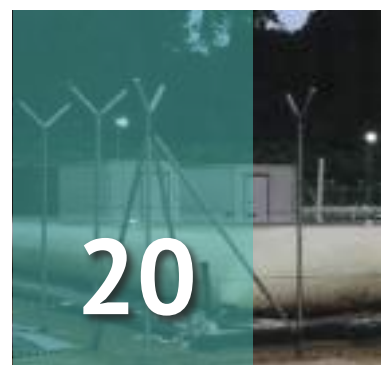
 **LIFTING,**
moving or maintaining heavy loads

 **STORING**
water, waste, or fuel for short or long term storage

 **PLUGGING PIPE**
for maintenance or containment of fluids

 **COMPENSATOR**
separating hydraulic fluids, absorbing variations in volume

 **PROTECTING**
the environment and the people working along-side it every day



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TO LIFT

PRONAL lifting bags are designed to efficiently **lift, push, compress or isolate objects** in industrial applications.

A range of quarry and CBP cushions is available to complement our range.



EASY

to use



QUICK

to set up



Steady

LIFTING



CLC// Cylinder lifting bag

 To lift

 To store

 To plug

 To secure



Cylindrical

CLC, CYLINDER LIFTING BAG

PRONAL Cylindrical Lifting Bags are used for lifting loads, machinery or vehicles in any working sector.

Due to its design, CLCs offer a significantly higher lifting height than conventional lifting bags.

ADVANTAGES



High lifting height (1000 mm)



Lift loads of up to 12 tons



Used with all types of soil
(Soft earth, gravel, snow-covered...)



Low working pressure (1b)

REF.	Code	Dimensions (mm)	Thickness (mm)	Weight (kg)	Max lift capacity (T)	Max lifting height (mm)	Air capacity (L)
3T	112370	610	50	3	3	430	266
5T	112371	760	50	4	5	590	570
7T	112372	910	70	7	7	610	840
12T	112373	1220	100	13	12	1000	2475

For all CLC models : Working pressure (bar) = 1 | Pressure test (bar) = 1 | Bursting pressure > 3.5

APPLICATIONS

- Vehicle maintenance
- Moving machinery
- Turning over heavy loads
- Constant and regular lifting of all loads
- Locking and holding machinery



CLT // High-pressure lifting bag



To lift



To store



To plug



To secure



**Non-sliding
surface**

CLT, LIFTING BAG

Due to how lightweight and thin they are, PRONAL high-pressure lifting bag can be used in numerous fields, such as the construction industry...

Unlike the hydraulic jack, they have a very small footprint at rest.

ADVANTAGES



Lift loads of up to 65 tons



Lifting Height of up to 500 mm



Inflatable on unstable soil



Working pressure of 8 bar

Ref.	Code	Dimensions (mm)	Thickness (mm)	Weight (kg)	Max lift capacity (T)	Max lift height (mm)	Air capacity (L)
CLT 1	058156	150x150	25	0.6	1	90	4.8
CLT 3	058157	200x200	25	1	3	115	8
CLT 6	058158	300x300	25	3	6	175	48
CLT 10	058159	380x380	25	4	10	220	88
CLT 14	058160	420x420	25	5	14	245	104
CLT 19	058161	510x510	25	8	19	295	200
CLT 24	058162	560x560	25	9	24	320	288
CLT 24L	058163	1000x320	25	9	24	215	224
CLT 30	058164	620x620	25	10	30	345	368
CLT 43	058165	750x750	25	15	43	410	640
CLT 54	058166	840x840	25	19	54	465	928
CLT 65	058167	920x920	25	22	65	515	1288

For all CLT models : Working pressure (bar) = 8 | Pressure test (bar) = 12 | Bursting pressure > 4

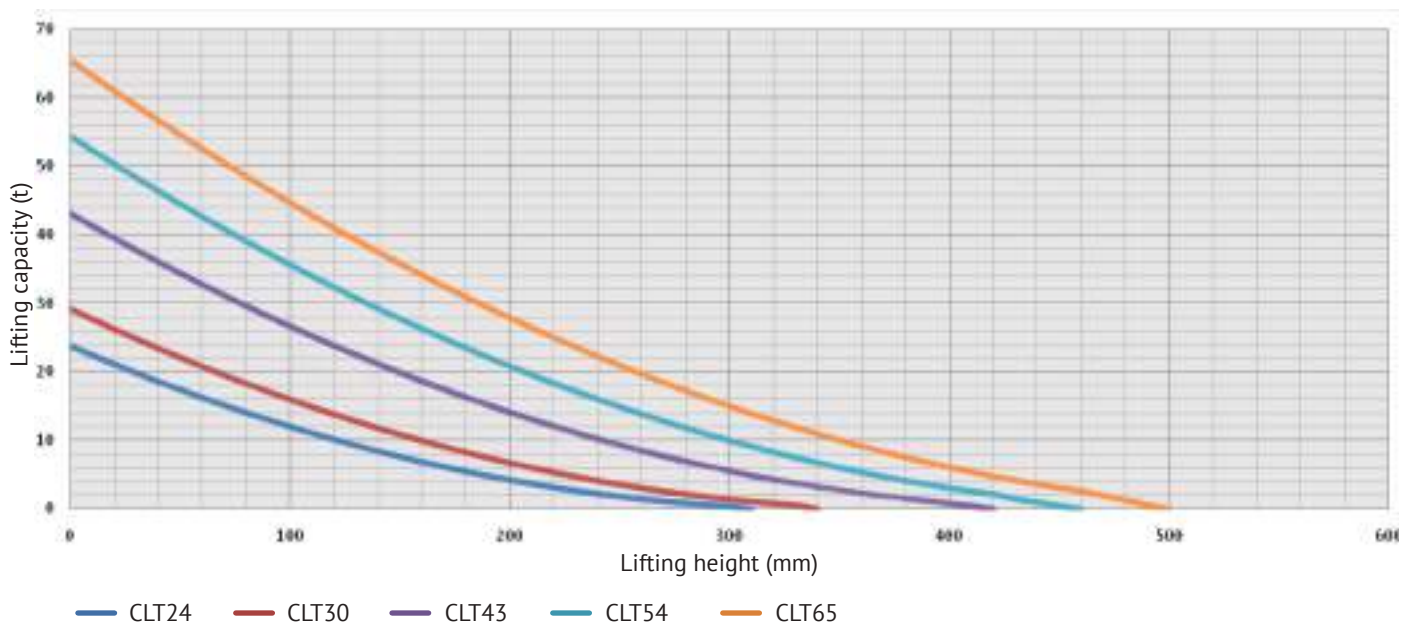
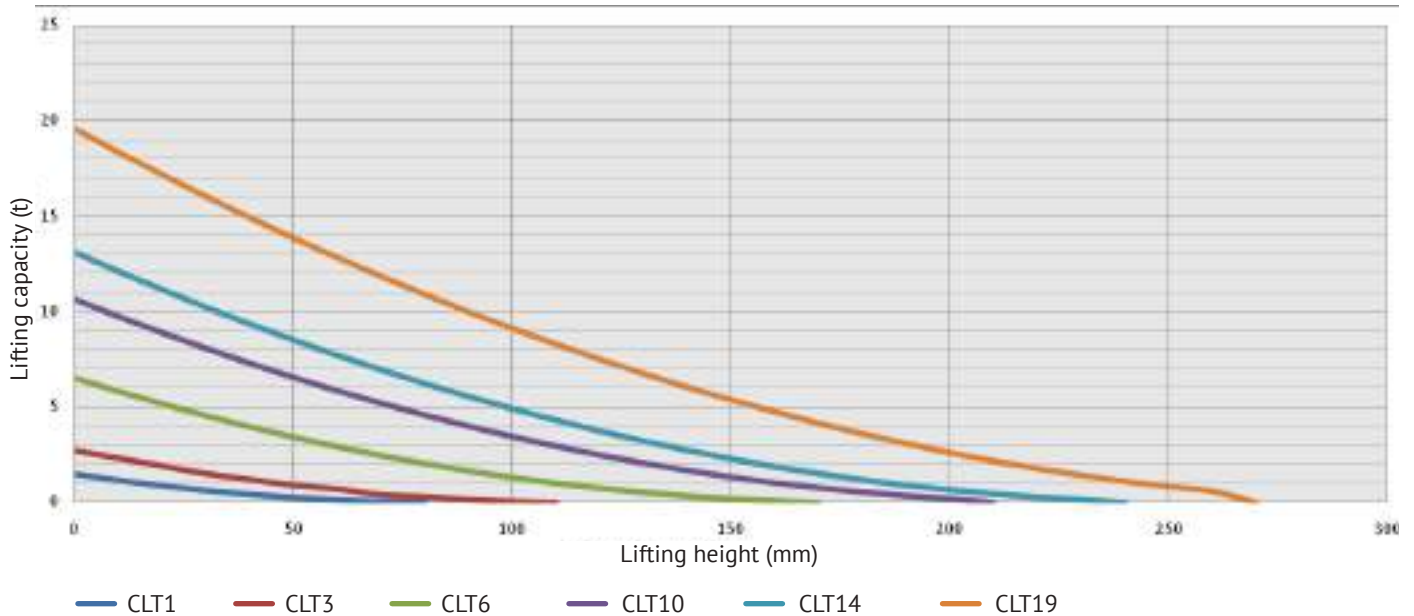
CLT// Technical data

 To lift

 To store

 To plug

 To secure



APPLICATIONS

- Rescuing trapped people and objects
- Lifting or balancing heavy loads
- Vehicular maintenance
- Pipe leveling
- Moving and shifting machines or loads
- Mine and quarries



CPF// Platform lifting bag



To lift



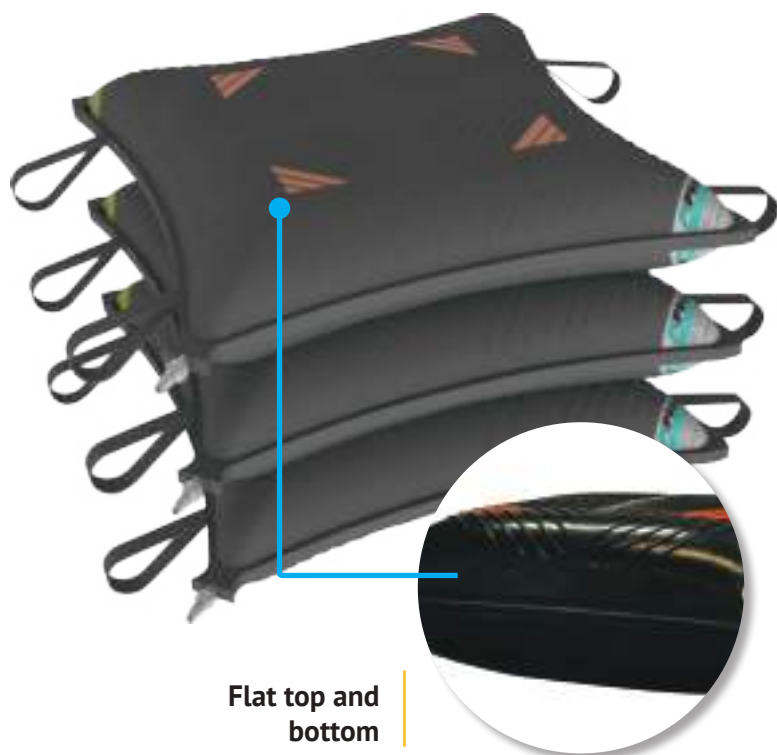
To store



To plug



To secure



Flat top and bottom

CPF, PLATFORM LIFTING BAG

Thin and compact, PRONAL's Platform-Lifting Bag are used to effortlessly lift heavy horizontal objects.

Securely stackable by threes, it offers a 500 mm sought-after lifting height in several fields of activity.

ADVANTAGES



Operate in conjunction with PRONAL control systems



Up to 10 bar inflation



Stackable by three

Ref.	Code	Dimensions (mm)	Thickness (mm)	Weight (kg)	Max lift capacity (T)	Max lift height (mm)	Air capacity (L)
CPF 30	112929	560x560	25	11	30	170	348
CPF 37	111957	620x620	25	12	37	170	457
CPF 54	112930	750x750	25	18	54	170	740
CPF 68	112931	840x840	25	22	68	170	979
CPF 81	112932	920x920	25	26	81	170	1218

For all CPF models : Working pressure (bar) = 10 | Pressure test (bar) = 12 | Bursting pressure > 4

APPLICATIONS

- Emergency services
- Vehicule lifting
- Maintenance
- Rescuing trapped people and objects
- Machine height adjustments



ACCESSORIES

DEADMAN CONTROLLER



Joystick

2 outlets 1/4"

CPF: ref.67752 - 10 bar
CLT: ref.66908 - 8 bar
CLC: ref.67753 - 1 bar

3 outlets 1/4"

CPF: ref.67754 - 10 bar
CLT: ref.67755 - 8 bar
CLC: ref.67756 - 1 bar



Push button

1 outlets 1/4"

CPF: ref.67759 - 10 bar
CLT: ref.66907 - 8 bar
CLC: ref.67760 - 1 bar

2 outlets 1/4"

CPF: ref.67757 - 10 bar
CLT: ref.66906 - 8 bar
CLC: ref.67758 - 1 bar



Simplified

1 outlets 1/4"

CPF: ref.67761 - 10 bar
CLT: ref.67192 - 8 bar
CLC: ref.67762 - 1 bar

2 outlets 1/4"

CPF: ref.67763 - 10 bar
CLT: ref.67193 - 8 bar
CLC: ref.67764 - 1 bar

INFLATION HOSE



Universal coupler - nipple 1/4"

Red

ref.67180 - 5 m
ref.66902 - 10 m

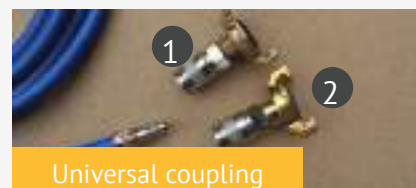
Blue

ref.67179 - 5 m
ref.66901 - 10 m

Yellow

ref.67751 - 5 m
ref.67750 - 10 m

ADAPTORS



Universal coupling

1

Claw

CPF/CLT/CLC: 67187

2

"Tête de chat"

CPF/CLT/CLC: 67188

PADS



Lifting bags pads

Thickness: 20 à 40 mm

Dimensions:

- 400x400 mm
- 500x500 mm
- 600x600 mm
- 800x800 mm
- 1000x1000 mm



Protection mats

Thickness: 10 mm

Dimensions: 2000x500 mm

+

with protection mats
connector - Thickness: 10 mm



Pressure regulator

ref.66905 - 200 bar / 10 bar



Shut off unit

ref.66904 - with universal
coupler 1/4" + nipple 1/4"

Lifting bags

// Pneumatic lifting bag



To lift



To store



To plug



To secure



Lifting bag fit into all types of space,
even the tightest ones

FLEXIBLE LIFTING BAG

Generally inflated with air, Pronal inflatable lifting bag are pneumatic components that perform mechanical functions such as pushing, pressing, guiding, clamping, locking, cushioning, lifting, moving, etc. Pneumatic flexible cylinders are an alternative to pneumatic and/or hydraulic rod-type lifting bag.

	Very high pressure	High pressure	Medium pressure	Pressure base
OPERATING PRESSURE	> 7 Bar	7 bar (max)	3 bar (max)	0.5 bar (max)
THICKNESS LIFTING BAG	> 20 MM	~ 18 MM	~ 12 MM	~ 2 MM
TYPE OF MANUFACTURING	Hot vulcanisation under vacuum in an autoclave	Hot vulcanisation under vacuum in an autoclave	Hot vulcanisation under vacuum in an autoclave	High-frequency welding

LIFTING BAG ADVANTAGES

- LOW THICKNESS
- MAINTENANCE-FREE
- CUSTOMISED DIMENSIONS
- EVENLY DISTRIBUTED FORCE
- HIGH EFFORT
- INFLATABLE AIR, WATER, OIL ...
- ADAPTATION OF THE MATERIAL TO ENVIRONMENT OF USE



OUR DIFFERENT LIFTING BAG



To quench



To manage



To lift



To tighten

Given the many possible uses for cylinders, we manufacture these products to measure, according to the specific requirements of their applications: location, strength, temperature, etc.

THE STANDARD RANGE

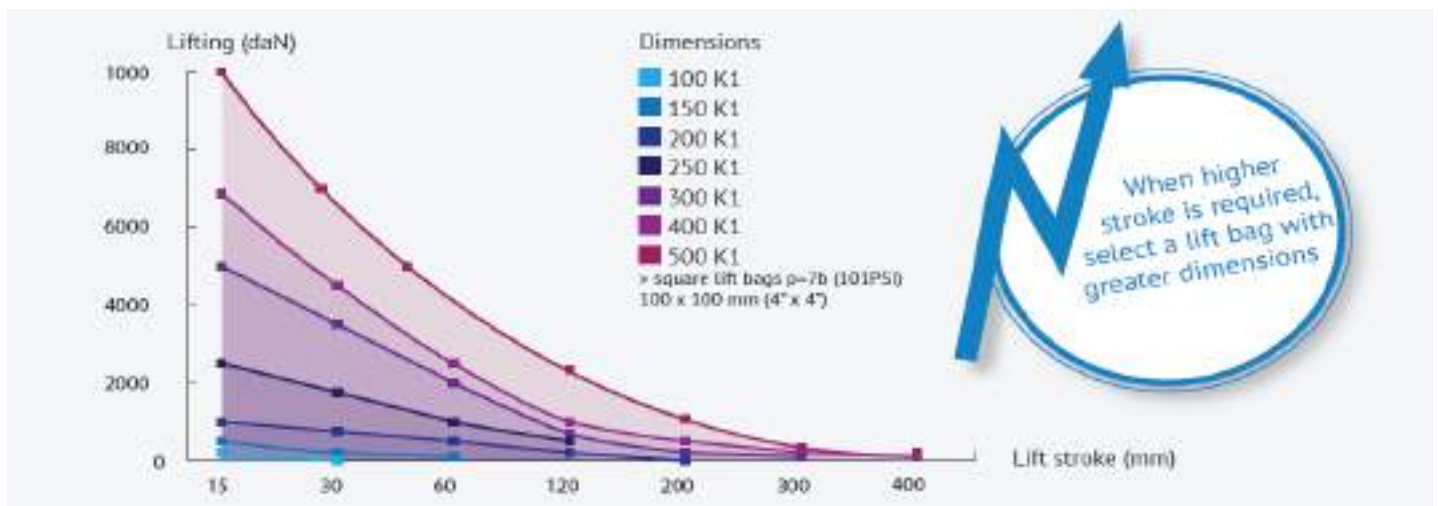
Inflated with air, water or oil

Inflating pressure (depending on conditions of use)

Custom shapes and sizes: square, rectangular, circular.

A material ranging from -20°C to +160°C

A basic accessory: a 1/4" or 3/4" tube placed in the centre of one face



APPLICATIONS

- Press
- Lift
- Guiding
- Tightening/handling
- Tying/dampening

FOR ANY FURTHER INFORMATION,
PLEASE DO NOT HESITATE TO CONTACT US



INFLATABLE BOTTLE GRIPPER

// Pneumatic Grippers



To lift



To store



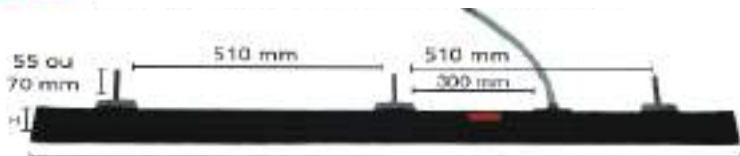
To plug



To secure



TECHNICAL SPECIFICATIONS



MC = 1320 MM - ML = 1460 MM

Ø : inflated diameter (profilés included)

H = Height - E = Thickness when empty

OPTIONAL :

Food quality, bottom reinforcement, ...

PRESENTATION

Pneumatic grippers are used for palletising and depalletising bottles and flasks. Specific ranges exist for each type of bottle: Bordeaux, Burgundy, Champagne, etc.

These inflatable bladders are an alternative to gripping tulips and handling pliers. They complement the vacuum plates used for glass jars. They can also be used to move complete rows of containers, minimising the need for machine adjustments when changing bottle types.



ADVANTAGES

LOW THICKNESS WHEN EMPTY

ADAPTABILITY TO DIFFERENT SURFACES

EVENLY DISTRIBUTED THRUST

QUICK, EASY INSTALLATION

Ref.	Ø (mm)	H (mm)	E (mm)
MC 20	20	36	7.5
MC 27	27	48	7.5
MC 33	33	55	7.5
MC 37	37	63	7.5
MC 47	47	79	7.5
MC 57	57	93	7.5
MC 67	67	108	8.5
MC 80	80	129	8.5
MC 90	90	146	8.5
MC 100	100	162	8.5



INFLATABLE BOTTLE GRIPPER

// Pneumatic Grippers

 To lift

 To store

 To plug

 To secure

SPECIFIC RANGES

Short neck



Half-inflated



Standard lengths for inflatable grippers are 1320 mm or 1460 mm. Their diameter varies between 20 and 100 mm depending on l'écartement des

DIFFERENT RANGES



Small format short-neck grippers - MCC



Half-inflatable grippers - MDG



Double grippers - MCB



Profled grippers - MCP



Long neck bottle grippers - MC/ML



Multi-format grippers - MCS

PSM// Submarine lifting bag



To lift



To store



To plug



To secure



**Sturdy
hook system**

PSM, SUBMARINE LIFTING BAG

Underwater parachutes provide additional buoyancy to help lift submerged loads.

Their sturdy design helps insure safety and efficiency when operated.

ADVANTAGES



Range of 100 kg to 5 tons



Can be coupled together



High straps resistance to traction
Max 4500 daN, depending on models

Ref.	Height (mm)	Max height (mm)	Submarine diameter (mm)	Straps diameter (mm)	Volume (m ³)	Number of straps
PSM 1000	1 700	2 300	1 250	450	1.15	4
PSM 3000	2 750	3 350	1 700	550	3.41	9
PSM 5000	3 200	3 600	2 100	600	5.76	12

Other sizes on request

APPLICATIONS

- Subsea stabilization of heavy load
- Underwater lifting of heavy load
- Additional buoyancy in nuclear pool
- Holding of heavy objects during offshore installation & maintenance



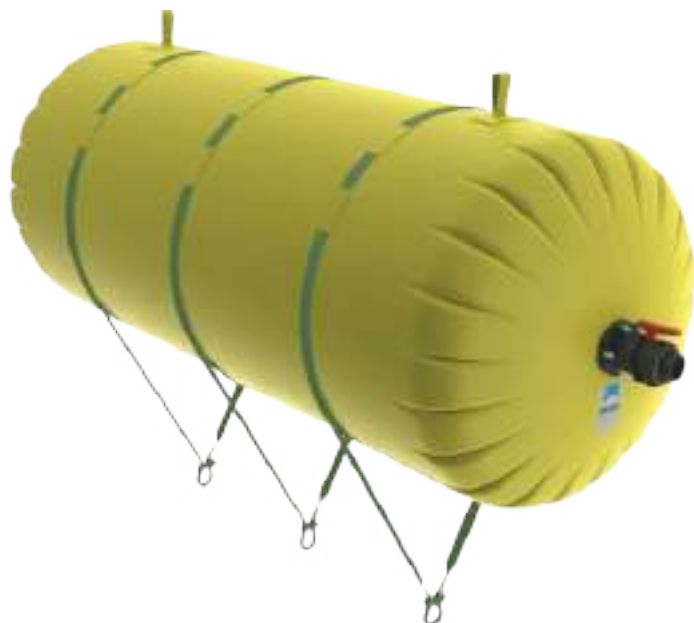
RDF// Lifting unit

 To lift

 To store

 To plug

 To secure



RDF, LIFTING UNIT

PRONAL lifting units are used for raising submerged loads during refloating operations.

Made to measure, our lifting units bring efficient solutions to several markets requirements (offshore, nuclear...).

ADVANTAGES



Lifting capacities to 8 tons



High straps resistance to traction,
Max 10 000 daN, depending on
models



Fitted with inflation devices and a
quick-release pressure relief valve

Ref.	Load (kg)	Diameter (mm)	Lenght (mm)	Number of straps	Height (mm)	Weight steel rod (kg)	Total weight (kg)
RDF 1000	1 000	1 050	1 500	2	525	10	25
RDF 3000	3 000	1 250	2 900	4	625	45	73
RDF 5000	5 000	1 500	2 900	5	750	50	86
RDF 8000	8 000	1 890	2 900	5	945	70	130

Other sizes on request

APPLICATIONS

- Additionnal buoyancy
- Marine salvage and refloating operations
- Underwater load lifting or lowering
- Pipes levelling





TO STORE

Quick to install and requiring almost no maintenance, PRONAL flexible tanks are your key to temporary or permanent storage for all types of fluids :

- **drinking and non-potable water,**
- **industrial wastes,**
- **fuel, and more ...**

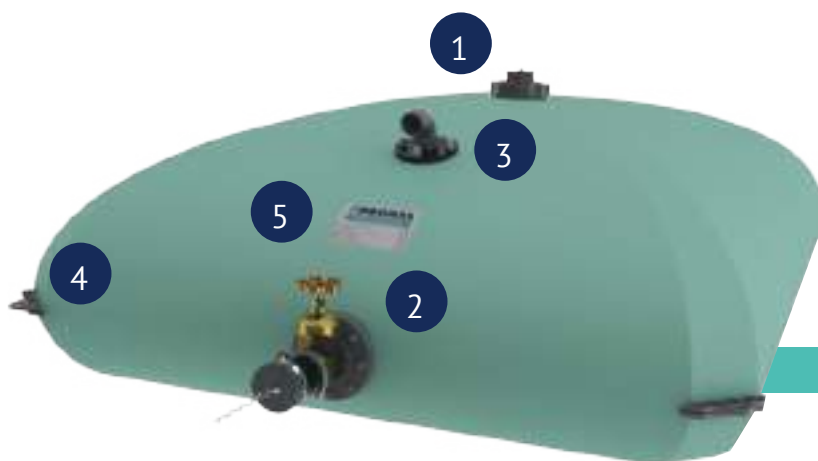
➤ **ECONOMICAL**
solution

➤ **EASY**
to install

➤ **RELIABLE**
to use



Raw water storage // Flexible storage tank



RAW WATER TANK

Today, effective management and conservation of water resources is a key economic and environmental challenge.

Thanks to their innovative design, PRONAL tanks are the best solution to creating temporary or long term water reserves.

ADVANTAGES

*Details accessories mentioned in below table



Low investment



Easy & quick to deploy



No evaporation



No maintenance



No planning permit required

Volume (m ³)	5	10	20	50	100	250	500
Reference	C5EB5	C5EB10	C5EB20	C5EB50	C5EB100	C5EB250	C5EB500
Dimensions (m)	2.96x3.51x0.8	2.96x5.65x0.9	4.44x6.20x1.10	5.92x9.53x1.30	8.88x10.75x1.50	10.36x20.41x1.50	19.24x22.06x1.50
Weight (kg)	27	41	65	129	216	475	950
Packing (mm)	1020x620x635	1235x820x550	1235x820x750	1235x820x960	1340x940x1080	2170x1260x1380	2200x1700x1000
ACCESSORIES							
1 Simple vent	x1	x1	x1	x1	x1	x1	x1
2 Side inlet / Outlet	2 x Ø2"	2 x Ø2"	2 x Ø2"	2 x Ø2"	2 x Ø3"	2 x Ø3"	2 x Ø3"
3 Overflow	1 x Ø2"	1 x Ø2"	1 x Ø2"	1 x Ø2"	1 x Ø3"	1 x Ø3"	1 x Ø3"
4 Corner plates	x4	x4	x4	x4	x4	x4	x4
5 Info marking	x1	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1	x1

APPLICATIONS

- Water storage on construction sites
- Water storage for drilling operations
- Recovery
- Rainwater recovery

Drinking water storage

// Flexible storage tank

 To lift

 To store

 To plug

 To secure



DRINKING WATER TANK

It is often too difficult and costly for the traditional drinking water network to maintain isolated construction sites or living quarters. Having been designed to meet several food grade certifications, our tanks are the optimal solution, and do not alter the quality of the stored drinking water.

ADVANTAGES



Light and foldable



Protected against external contaminations



Easy to clean



Several food grade certifications



Resistant to hard climatic conditions

Volume (m³)	5	10	20	50	100	250	500
Reference	CSEP5	CSEP10	CSEP20	CSEP50	CSEP100	CSEP250	CSEP500
Dimensions (m)	3.21x3.24x0.8	4.28x4.38x0.9	4.28x6.44x1	6.42x8.76x1.30	7.49x12.77x1.50	12.84x16.39x1.50	18.19x23.05x1.50
Weight (kg)	27	45	65	129	218	475	950
Packing (mm)	1020x620x635	1235x820x550	1235x820x750	1235x820x960	1340x940x1080	2170x1260x1380	2200x1700x1000
ACCESSORIES							
Simple vent	x1	x1	x1	x1	x1	x1	x1
1 Side inlet / Outlet	2 x Ø2"	2 x Ø2"	2 x Ø2"	2 x Ø2"	2 x Ø3"	2 x Ø3"	2 x Ø3"
2 Corner plates	x4	x4	x4	x4	x4	x4	x4
3 Info marking	x1	x1	x1	x1	x1	x1	x1
4 Repair kit	x1	x1	x1	x1	x1	x1	x1

APPLICATIONS

- Water storage on isolated sites
- Drinking water on life camps
- Maintenance operations
- Buffer storage on networks

Firefighting reserve

// Fire tank

 To lift

 To store

 To plug

 To secure

FIREFIGHTING RESERVE

PRONAL has developed a range of flexible tanks designed to protect buildings from fire hazards.

Approved by the emergency response services and compliant with the current standards, PRONAL's fire tanks are the best solution to secure infrastructures at

ADVANTAGES



Long service life



Adapted to fire brigade couplings



No structural work required



Useful capacity storage



Resistant to weather conditions

Volume (m³)	60	90	120	160	240	360
Reference	CSIHS60	CSIHS90	CSIHS120	CSIHS160	CSIHS240	CSIHS360
Dimensions (m)	5.92x10.70x1.4	7.40x11.82x1.5	8.88x12.52x1.5	10.36x13.73x1.5	10.36x19.66x1.5	13.32x21.95x1.5
Weight (kg)	170	235	298	428	541	777
Packing (mm)	1340x940x1080	1340x940x1080	1340x940x1080	1340x940x1080	2170x1260x1380	2200x1700x1000
ACCESSORIES						
Simple vent	x1	x1	x1	x1	x1	x1
Side inlet / outlet	1 x Ø4"	1 x Ø4"	1 x Ø4"	1 x Ø4"	1 x Ø4"	1 x Ø4"
Corner plates	x4	x4	x4	x4	x4	x4
Info marking	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1

APPLICATIONS

- Isolated site protection
- Extension of factories
- Extension of commercial sites
- Fire-extinguishing water collection



Industrial storage

// Waste & effluents tank



To lift



To store



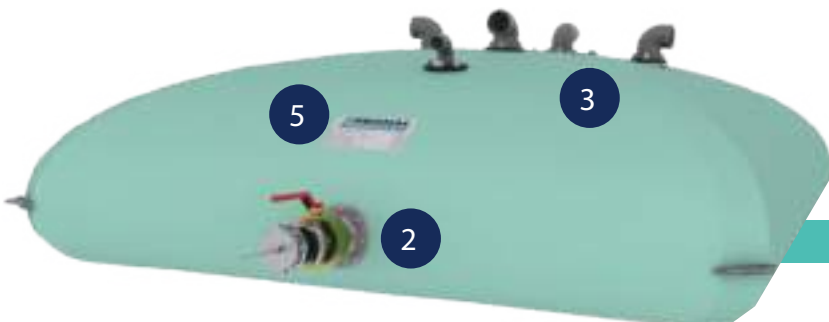
To plug



To secure

WASTE & EFFLUENTS TANK

Designed and manufactured from high-strength coated fabric, PRONAL tanks are compatible with most acidic or basic solutions and are the ideal way to keep them



ADVANTAGES



Watertight solution



Odor free storage



Foldable & movable



Chemical compatible



Temporary or permanent solution

*Details accessories mentioned in below table / Number 2 is not shown in the

Volume (m³)	50	100	200	300	400	500
Reference	CSEC50	CSEC100	CSEC200	CSEC300	CSEC400	CSEC500
Dimensions (m)	5.92x9.53x1.30	8.88x10.75x1.50	10.36x16.70x1.50	11.84x20.97x1.50	14.80x22.31x1.50	19.24x22.06x1.50
Weight (kg)	152	257	461	660	894	1114
Packing (mm)	1235x820x960	1340x940x1080	1830x1040x1200	2170x1260x1380	2200x1700x1000	2200x1700x1000
Accessories						
1 Man hole	x1	x1	x1	x1	x1	x1
2 Side inlet/outlet	2 x Ø4"	2 x Ø4"	4 x Ø4"	4 x Ø4"	4 x Ø4"	4 x Ø4"
3 Overflow	2 x Ø3"	2 x Ø3"	4 x Ø3"	4 x Ø3"	4 x Ø3"	4 x Ø3"
4 Corner plates	x4	x4	x4	x4	x4	x4
5 Info marking	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1

APPLICATIONS

- Waste water treatment
- Chemical effluents storage
- Buffer storage during recycling
- Sewage sludge storage

Fuel bladder

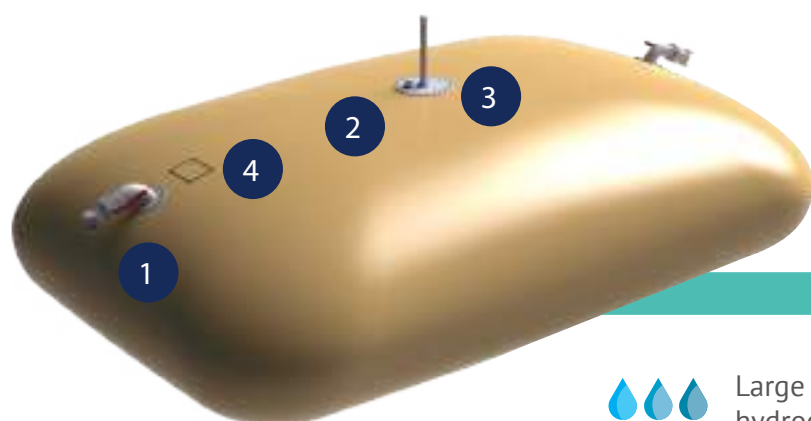
// Hydrocarbon storage

 To lift

 To store

 To plug

 To secure



FUEL TANK

From crude oil to Jet A1, PRONAL flexible bladders developed to store hydrocarbons in any condition. Made out of a highly resistant material coated with elastomer and hot vulcanized in an autoclave, PRONAL bladders have been recognized for years by several military organizations, as well as oil & gas companies..

ADVANTAGES



Large compatibility with hydrocarbons



Resistant to extreme climatic conditions



Foldable & movable



No external contaminations



Very long service life



Stored fuel quality

Volume (m³)	5	10	25	40	50	100	200	300
Reference	15150	26262	26495	29345	29347	29350	29353	29354
Dimensions (m)	5.4x2.12x0.8	4x4x1.1	6.4x4.8x1.3	6.7x6.7x1.3	7.6x6.97x1.3	11.3x8.39x1.35	18.5x9.8x1.35	17x14.6x1.35
Weight (kg)	55	100	147	200	230	380	681	900
Packing (mm)	900x900x500	900x900x500	1100x1100x600	1600x1200x700	1600x1200x700	1800x1300x800	2200x1300x800	2300x1300x900
ACCESSORIES								
1 Side inlet/outlet	2 x Ø2"	2 x Ø3"	2 x Ø3"	2 x Ø3"	2 x Ø3"	2 x Ø4"	2 x Ø4"	2 x Ø4"
2 Man hole	x1	x1	x1	x1	x1	x1	x1	x1
3 Overpressure vent	x1	x1	x1	x1	x1	x1	x1	x1
4 Info marking	x1	x1	x1	x1	x1	x1	x1	x1
UV cover	x1	x1	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1	x1	x1

APPLICATIONS

- Extension of fuel depot
- Set up of fuel depot in remote areas
- Recovery
- Storage during recycling/treatment

Other// storage



To lift



To store



To plug



To secure

SELF-SUPPORTING OPENTANK

- Self-supporting circular opentank
- From 1 m³ to 20 m³
- Top fill system
- Easy & quick to set and to clean



STRUCTURAL OPENTANK

- Structural circular opentank
- From 5 m³ to 150 m³
- For liquid or solid elements storage
- Ideal for additional storage



TRANSPORT TANK

- Transport flexible tank
- From 1 m³ to 12 m³
- For trucks, boats, aircrafts
- Allows dual use of the same vehicle



ROLABLE & HELITRANSPORTABLE FLEXIBLE TANK

- From 200 L to 1900 L
- Remote areas refueling with aircrafts or helicopters
- Can be released at more than 10m high



FUEL & WATER LOGISTICS



TURNKEY FUEL
ARMS



ISOLATED
DESTINATION



RESPONSIVE
SYSTEM



CONTAINERIZED DEPOT



BOLTED FUEL TANK



REFUELLING TRAILER



FLEXIBLE FUEL TANK



TRAINING



MOBILITY

OUR SOLUTIONS

- + Turnkey fuel farms
- + Containerized depot
- + Decanting, Storage & Dépotage
- + Distribution, Filtration & Counting system
 - Feeder
 - Tap
 - Suction
 - Repression
 - Level indicator
 - Pump
 - Hoses
 - Level sensor
- + Engineering, Installation & Training



Oil&Gas



Defense



Construction
& mining



Power
generator



NGO

Gas holder



To lift



To store



To plug



To secure



GAS HOLDER

It enables gas to be stored with optimum impermeability. The product consists of an elastomer membrane with a special coating. It can store several types of gas, including CH₄, H₂, CO₂ and others. It can be used for conditioning and mixing.

ADVANTAGES



Ideal for interiors where gas emissions are a problem



Tailored to your project



Resistant, composed of an elastomer membrane with weave



Improved waterproofing thanks to its elastomer composition and internal coating

CHARACTERISTICS MAIN FEATURES	
TYPE	Elastomer gasometer
USE	Buffer storage of CH ₄ , H ₂ , CO ₂ and other syngas
MATERIAL	NPVC/NBR with waterproof coating
MAINTENANCE/RESISTANCE	Suspended by hanging skirts or other system on request
MANUFACTURING	Vulcanization
	Booster, safety valve, valves, inlet, outlet, condensate
ACCESSORIES/OPTIONS	- Containerised solution - Installation by our service teams Container fitted on request
INSTALLATION TIME	2 hours
DIMENSIONS	Tailored to your needs

This product has a [real ecological](#) advantage. It helps to combat global warming.

This buffer storage solution prevents polluting gases from being released into the atmosphere.

CAN BE USED FOR SEVERAL ACTIVITIES:

- Hydrogen production by electrolysis
- Production of syngas by pyrolysis
- Recovery of non-condensed gases by pyrolysis
- Methanisation

Precise level monitoring

// Level sensor



To lift



To store



To plug



To secure



Made from **robust materials** such as PA12 nylon, the Pronal level sensor is designed **to withstand harsh environments**, with an operating range of **-20°C to 80°C**.

ADVANTAGES :

PRECISION AND RELIABILITY

Designed with high-quality materials
Cutting-edge technology

• USE

No prior calibration required
Instant reading of values

• DURABILITY AND SAFETY

Withstands temperatures from -20°C to 80°C
Cannot be hacked remotely

• FLEXIBILITY

Easy to move
Adaptable to various types of tanks and liquids (water, fuel, oil, etc.)

The Pronal level sensor is an advanced solution **designed for accurate, real-time monitoring of liquid levels and corresponding volumes in flexible tanks**.

Thanks to its technology, the sensor **ensures optimal management of available resources**, whether water, fuel, oil or any other fluid.

The level sensor is **adaptable to all types of tanks and liquids**. This flexibility makes it an ideal solution for a variety of sectors with specific needs for monitoring liquid volumes.

CHARACTERISTICS MAIN FEATURES	
TYPE	Instrument for measuring the level of liquid in a flexible tank and indicating the estimated volume
MATERIALS	Nylon PA12, resistant to harsh environments
TEMPERATURE RANGE	-20°C to 80°C
INSTALLATION	Fast, no calibration required
DIMENSIONS	L = 16 cm x l = 10,5 cm x h = 5,5 cm
ACCESSORIES	- Rechargeable battery - Preventive rotating beacon - Human-machine interface for monitoring flexible tanker fleets

APPLICATIONS :

- **Industrial:** Monitoring of production and storage reservoirs
- **Agricultural:** managing water and nutrient levels in irrigation systems
- **Defence:** Monitoring fuel levels and other critical fluids in military equipment



COMPENSATORS

PRONAL compensators have been developed to **separate hydraulic fluids, absorb volume variations and limit pressure surges.**

➤ **PERFECT**
sealing

➤ **QUICK**
to set up

➤ **LONG**
service life



Compensators // EXP & STP



GENERAL

Usually fitted inside hydraulic reservoirs, expansion joints (or bladders) **operate without a source of energy**. By **inflating or filling them**, they compensate for variations in the volume of oil or any other fluid due to changes in temperature or level. In this way, the fluid contained is not in contact with the air and is therefore protected from any external contamination.

They can also be used to create a variation in volume or to compensate for the effects of excess pressure (anti-hammer range).

BENEFITS



Installation
quick and easy



Broad chemical
compatibility



High mechanical
strength



Made to measure



Watertight
perfect

APPLICATIONS

- Compensators are solutions for :
- compensating for changes in the volume of a fluid
- separate or balance two fluids (liquid or gaseous)
- sealing a hydraulic circuit
- pressurise a hydraulic circuit

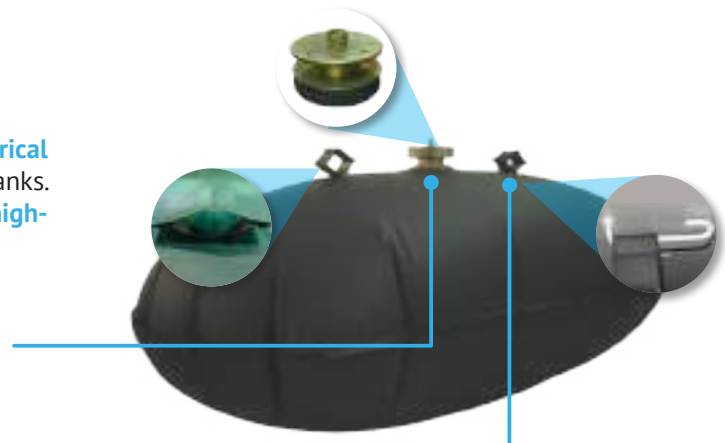


STP - Energy sector

Separators are designed **to protect the oil contained in electrical transformers**. They separate the air and oil inside hydraulic tanks. Their high mechanical strength makes STP PRONAL **high-performance customised hydraulic compensators**.

(large number of models) **Flange**
For external air intake

FIXING BRACKET
Keeps the stp in the preservative



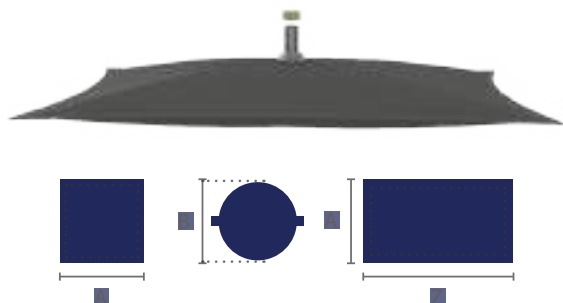
Compensators // EXP and STP



EXP - Hydraulic sector

EXP PRONAL compensators are used to protect hydraulic fluids contained in a tank from the atmosphere by using a bag to compensate for variations in volume.

This 'auxiliary reservoir' can be located either inside or outside the reservoir.

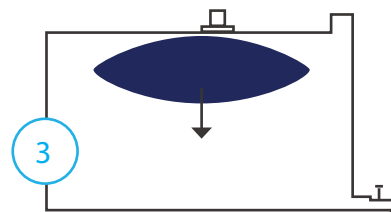
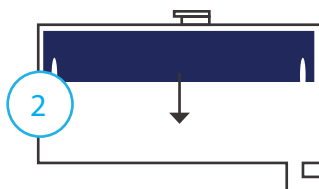
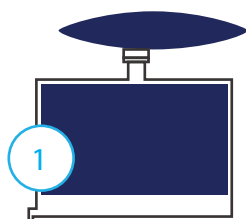


VOLUME MAXI	EXP. CYLIN.	EXP. CARRÉ		EXP. MEDIUM RECTANGLE			EXP. LONG RECTANGLE		
L	mm	mm		mm			mm		
	B	A	B	Z	A	B	Z	A	B
1	Ø250	240	128	260	190	96	400	140	64
4	Ø368	320	178	400	280	153	490	240	127
10	Ø465	420	242	520	360	204	760	280	153
15	Ø520	480	280	580	400	229	860	320	178
20	Ø580	520	306	640	440	255	920	340	191
25	Ø640	560	331	700	460	267	980	360	204
30	Ø664	600	357	720	500	293	1060	380	217
40	Ø706	660	395	800	540	318	1160	420	242
50	Ø784	700	420	840	580	344	1260	440	255
60	Ø810	740	446	900	620	369	1360	460	267
70	Ø850	780	471	940	640	382	1460	480	280

Other custom sizes



ASSEMBLY AND START-UP



Lock gate motor oil protection
Hydraulics



Oil protection
of an electrical power transformer



Absorbing shock waves on a network /
Surge protection
Industry



TO PLUG

PRONAL's all-purpose stoppers can be used in a variety of in-pipe operations :

- waterproof tests,
- sector isolation,
- temporary sealing,
- maintenance or cleaning operation...

➔ **PERFECT**
sealing

➔ High counter pressure
RESISTANCE

➔ **QUICK**
to set up



OPL/OPLT // Inflatable pipe stopper

 To lift

 To store

 To plug

 To secure

OPL/OPLT, INFLATABLE PLUGS

OPL/OPLT inflatable plugs are used to temporarily and effectively plug your pipe networks and systems.

They come in a variety of diameters and can be used in a wide range of applications, including sewage, rainwater and wastewater networks with the NR range, and hydrocarbons and chemicals with the NBR* range.

OPLs are ideal for pipe repairs, maintenance, flow diversions or leak testing (air or water), in complete safety.

* No need to check compatibility with Pronal teams.



ADVANTAGES



Easy installation



Large chemical compatibility



Excellent back-pressure resistance



Perfect sealing

THE OPL RANGE (WITHOUT BYPASS)

Ref	Min diameter Ø (mm)	Max diameter Ø (mm)	Deflated diameter Ø (mm)	Length (mm)	Working pressure	Max back pressure	Weight (Kg)	Eye bolt sizews
OPL 30/60	30	60	29	150	3	Please always refer to our chart pressure before using	0,2	NA
OPL 45/80	45	80	43	150	3		0,3	NA
OPL 50/100	50	100	45	110	3		0,3	NA
OPL 65/125	65	125	63	250	3		0,4	NA
OPLS 75/150	75	150	70	195	3		0,5	NA
OPL 75/150	75	150	70	350	3		0,8	NA
OPLS 100/200	100	200	90	250	3		0,8	NA
OPL 100/200	100	200	86	350	3		1,3	NA
OPL 100/150	100	150	90	125	3		0,6	NA
OPL 100/250	100	250	86	600	3		2,2	NA
OPL 125/200	125	200	110	152	3		0,7	NA
OPL 150/250	150	250	145	255	3		2	1xM8
OPL 150/300	150	300	145	465	3		2,6	1xM8
OPL 200/400	200	400	190	555	3		5,5	2xM10
OPL 200/500	200	500	170	725	3		5,5	1xM8
OPL 300/600	300	600	288	715	3		12	2xM10
OPL 400/800	400	800	370	1030	3		22	2xM12
OPL 500/1000	500	1000	472	1140	3		32,5	2xM12
OPL 500/1400	500	1400	490	2200	1,5		55	2xM12
OPL 600/1200	600	1200	570	1400	1,5		49	2xM16
OPL 600/1500	600	1500	570	2180	1,5		65	3xM16
OPL 800/1600	800	1600	770	2000	1,5		90	3xM16
OPL 800/2000	800	2000	760	2750	1,5		125	4xM16

OPL/OPLT // Inflatable pipe stopper

 To lift

 To store

 To plug

 To secure

 **THE OPLT RANGE (SEWER PLUG WITH BYPASS)** - for max back pressure, please refer to right table

Ref	Min diameter Ø (mm)	Max diameter Ø (mm)	Deflated diameter Ø (mm)	Lenght (mm)	Working pressure	By Pass diameter	Weight (Kg)	Eye bolt sizews
OPLT Ø 100/200	100	200	86	350	2.5	1 x 1/4"	2	NA
OPLT Ø 150/250	150	250	145	255	2.5	1 x 1/2"	3	M8
OPLT Ø 150/300	150	300	145	465	2.5	1 x 1/2"	4	M8
OPLT1 Ø 200/400	200	400	190	555	2.5	2 x 1"	7	M10
OPLT2 Ø 200/400	200	400	190	555	2.5	1 x 2"	7	M10
OPLT1 Ø 200/500	200	500	170	725	2.5	2 x 1"	7	M10
OPLT2 Ø 200/500	200	500	170	725	2.5	1 x 2"	7	M8
OPLT1 Ø 300/600	300	600	288	715	2.5	2 x 1"	16	M10
OPLT2 Ø 300/600	300	600	288	715	2.5	1 x 2"	16	M10
OPLT3 Ø 300/600	300	600	288	715	2.5	2 x 2"	18	M10
OPLT1 Ø 400/800	400	800	370	1030	2.5	2 x 2"	29	M12
OPLT2 Ø 400/800	400	800	370	1030	2.5	1 x 2"	27	M12
OPLT3 Ø 400/800	400	800	370	1030	2.5	1 x 4"	33	M12
OPLT1 Ø 500/1000	500	1 000	472	1140	2.5	2 x 2"	41	M12
OPLT2 Ø 500/1000	500	1 000	472	1140	2.5	1 x 2"	38	M12
OPLT3 Ø 500/1000	500	1 000	472	1140	2.5	1 x 4"	48	M12
OPLT1 Ø 500/1400	500	1 400	472	2200	1,5	2 x 2"	66	M12
OPLT2 Ø 500/1400	500	1 400	490	2200	1,5	1 x 2"	61	M12
OPLT3 Ø 500/1400	500	1 400	490	2200	1,5	1 x 6"	72	M12
OPLT1 Ø 600/1200	600	1 200	566	1400	1,5	2 x 2"	59	M16
OPLT2 Ø 600/1200	600	1 200	566	1400	1,5	1 x 2"	54	M16
OPLT3 Ø 600/1200	600	1 200	566	1400	1,5	1 x 6"	63	M16
OPLT1 Ø 600/1500	600	1 500	570	2180	1,5	2 x 2"	76	M16
OPLT2 Ø 600/1500	600	1 500	570	2180	1,5	1 x 2"	71	M16
OPLT3 Ø 600/1500	600	1 500	570	2180	1,5	1 x 6"	81	M16
OPLT1 Ø 800/1600	800	1 600	770	2000	1,5	2 x 2"	98	M16
OPLT2 Ø 800/1600	800	1 600	770	2000	1,5	1 x 2"	94	M16
OPLT3 Ø 800/1600	800	1 600	770	2000	1,5	1 x 6"	105	M16
OPLT1 Ø 800/2000	800	2 000	760	2750	1,5	2 x 2"	138	M16

APPLICATIONS

- Waterproof tests
- Isolating water networks
- Temporary sealing
- Repair operations
- Cleaning operations



OPL/OPLT// Inflatable pipe stopper

 To lift

 To store

 To plug

 To secure

INFLATABLE PIPE PLUGS - PRESSURE CHART

Head pressure - chart of pipeline pressures (valid for plugs made of NR)

In the following chart you will find indicatory values regarding the maximum back pressure when conducting water-tests with the inflatable plugs:

TYPE OF PIPE PLUGS (MM)	Pipe diameter (mm)																						
	30	45	50	60	65	75	80	100	125	150	200	250	300	400	500	600	800	1000	1200	1400	1500	1600	2000
30/60	2.4	1.7	1.5	0.8																			
45/80		2.4	2.4	2.2	2.1	1.8	1.0																
50/100			2.4	2.3	2.3	1.8	1.6	0.5															
65/125					2.4	2.3	2.3	1.6	0.8														
75/150						2.4	2.3	2.2	1.5	1.0													
100/150								2.4	1.5	0.5													
100/200								2.4	2.0	1.6	1.1												
125/200									2.4	1.5	0.5												
150/250										2.4	1.5	1.0											
150/300										2.4	2.2	2.0	1.5										
200/400											2.4	2.2	2.1	1.4									
200/500											2.4	2.3	2.2	1.5	0.4								
300/600													2.4	2.2	2.1	0.9							
400/800														2.4	2.3	2.3	1.1						
500/1000															2.4	2.3	2.2	0.9					
500/1400															1.4	1.4	1.3	1.3	0.9	0.8			
600/1200																1.4	1.2	1.1	0.5				
600/1500																1.4	1.3	1.3	1.1	1.0	0.8		
800/1600																	1.4	1.4	1.3	1.3	1.0	0.8	

These values are indicative values in clean concrete pipes. If required, contact us.

ACCESSORIES



Ref.	Designation
67194	"Simplified" controller 1 outlet 1/4"
67180	Inflation hose, Red 5 m Universal coupler 1/4" + nipple 1/4"
66902	Inflation hose, Red 10 m Universal coupler 1/4" + nipple 1/4"
67179	Inflation hose, Blue 5 m Universal coupler 1/4" + nipple 1/4"
66901	Inflation hose, Blue 10 m Universal coupler 1/4" + nipple 1/4"
67187	Adaptor Claw Universal coupling
67188	Adaptor "Tête de chat" Universal coupling
31332	Double bypass Ø 25 for air test for ORJT 100/200 & 3D 100/250

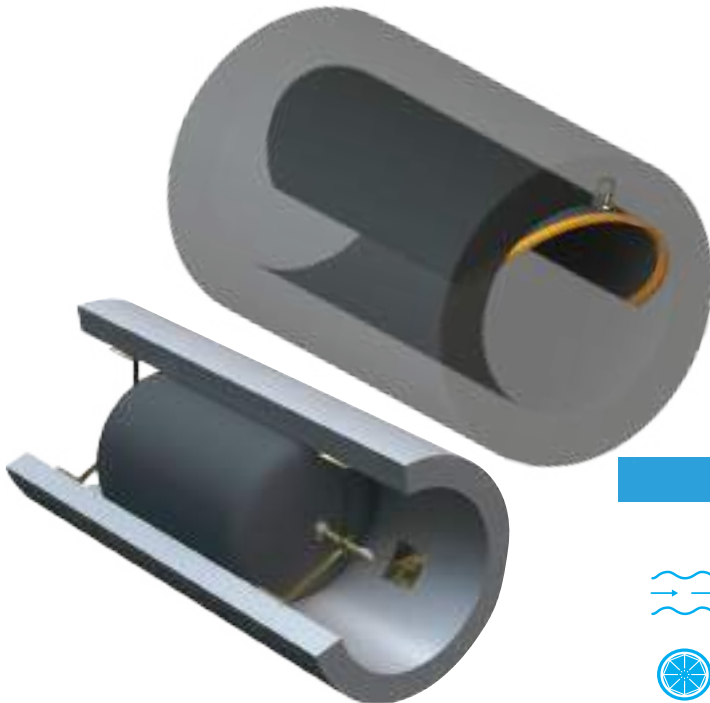
OPAP// Antipollution stopper

 To lift

 To store

 To plug

 To secure



OPAP : from diameter
100 to 1000 mm
OFR : from diameter
700 to 2000 mm

POLLU-PLUG AND OFR

The Pollu-Plug Anti-Pollution Stopper was developed in the interest of protecting the environment. Once inflated, it helps prevent pollution by retaining and stopping toxic or liquid spills.

Permanently set up in the top of the pipe, they are easy to operate either manually or remotely.

ADVANTAGES



Permanent installation
without flow disturbances



Complete security



Immediate sealing



Most large chemical
compatibility

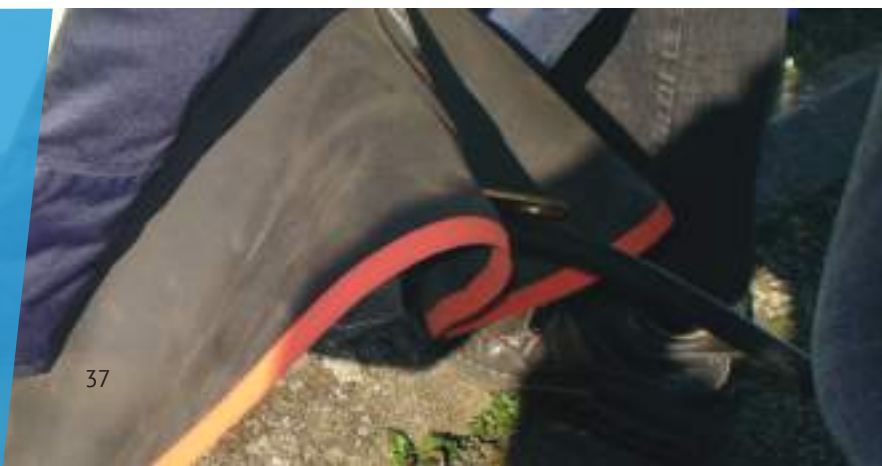


Obstruction when
deflated < 5%

OPAP	Diameter (mm)	Width-empty (mm)	Lenght-empty (mm)	Working pressure (bar)	Stem (")
OPAP 150	150	230	550	1.2	1/4"
OPAP 200	200	300	550	1.2	1/4"
OPAP 250	250	380	600	1.2	1/4"
OPAP 300	300	450	700	1.2	1/4"
OPAP 400	400	600	800	1.2	1/4"
OPAP 500	500	750	1000	1.2	1/4"
OPAP 600	600	900	1200	1	1/4"
OPAP 700	700	1050	1400	0.8	3/4"
OPAP 800	800	1200	1600	0.6	3/4"
OPAP 1000	1000	1550	2050	0.4	3/4"

APPLICATIONS

- Stops toxic or liquid spills in the sewage system
- Blocks water used by firefighters



OPAP // Antipollution stopper

 To lift

 To store

 To plug

 To secure



CONTROL UNIT

OPAP control unit are plug & play solutions to facilitate installation on site.

Their composition allows the operator to trigger several stoppers simultaneously thanks to remoted and automatic systems.



Control unit composition

ADVANTAGES



Autonomous system



Easy to use



Custom composition



Differents trigger options

SYSTEM OUTBREAK

MANUAL :

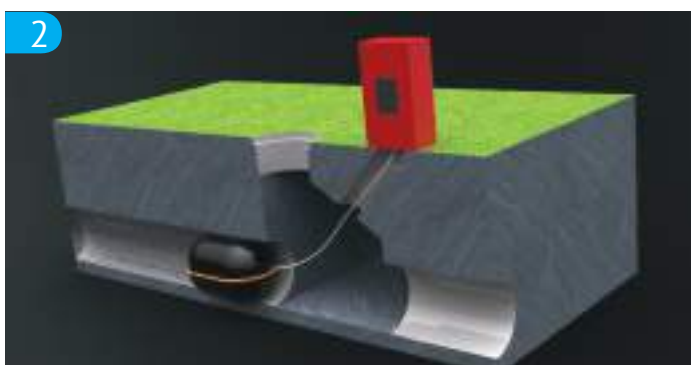
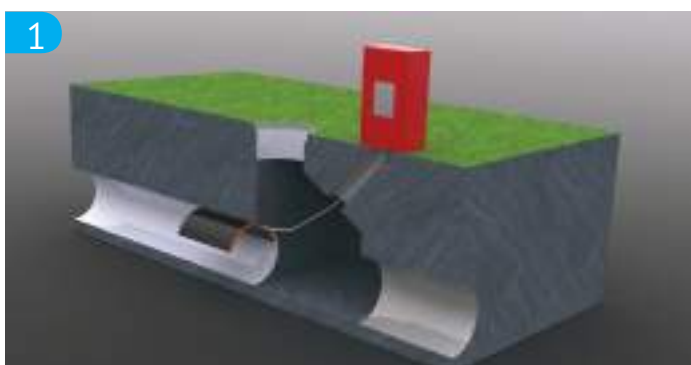
- PUNCH OUTBREAK SYSTEM
- WIRED TELECONTROL
- MOBILE TELECONTROL

Picture 1 : Deflated stopper.

It can be activated at any time. No outflow disturbances.

Picture 2 : Inflated stopper.

Immediate plugging of the pipe. Once deflated, the stopper returns to its start



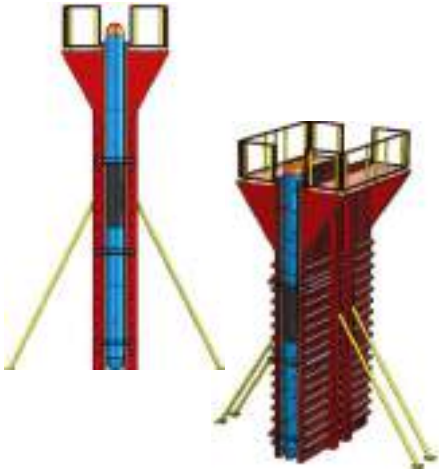
Concrete wall formwork

 To lift

 To store

 To plug

 To secure



PRESENTATION

Wall Formwork is a **pneumatic device for stopping the shuttered wall**, an alternative solution to heavy wooden or steel formwork. This patented solution is used by masonry crews to close off shuttering walls (waiting boxes) to improve concreting recovery, thus avoiding the risk of cracking and leaking laitance. **It makes formwork operations easier and safer.**

CHARACTERISTICS MAIN FEATURES

TYPE	Shutter / sail stop
USE	Formwork device for formwork walls
MATERIAL	Nitrile
INFLATION PRESSURE	1.0 bar
CONFECTION	Vulcanisation
ACCESSORIES (OPTIONS)	Small compressor Supply line
USE	Assembly 1 minute - Dismantling: ≤ 5 minutes
DIMENSIONS	Height: 1.60m (model Adaptable to 15 to 30cm sails)
MAXIMUM HEIGHT	4m

- ① Two carrying handles
- ② An air vent plug
- ③ An inflation coupler



Assembly with skirt

ADVANTAGES

-  **LIGHT**
Can be installed alone
-  **QUALITY/PRICE RATIO**
Quick return on investment thanks to time-saving on assembly and disassembly
-  **SECURITY**
Prevention of musculoskeletal disorders (MSD)



APPLICATIONS

It makes it possible to close off the walls of the formwork and improve the concreting process. It also takes the load off site cranes, freeing them up for other missions.

Because it's so light, the Wall Formwork can be installed and removed quickly and easily using a small compressor.



Other plugs



To lift



To store



To plug



To secure

OPV

- Up to diameter 2200 mm
- Up to 3 bar back-pressure
- all kind of pipes (concrete, HDPE, steel...)



OHP

- Up to diameter 2500 mm
- Up to 25 bar and more back-pressure
- For pipes under high pressure



OTR

- For manhole tests
- Up to diameter 1000 mm
- Up to 100 mbar of back-pressure



INFLATABLE PIPE PLUG FLAT

- Up to 1600 mm diameter
- Up to 1.5 bar back pressure
- Perfect seal



Contact us for higher back-pressure, different diameter or other particularity.
(resistance, chemical compatibility, accessories...)



TO SECURE

Whether it is human or environmental protection, PRONAL has developed solutions dedicated to :

- flood and pollution containment (land and sea barriers),
- optimizing security for operators (pneumatic protection shield).



Human

PROTECTION



Pollution

PREVENTION



Environmental

CARE



Smartshore®

// Inflatable trench shield



To lift



To store



To plug



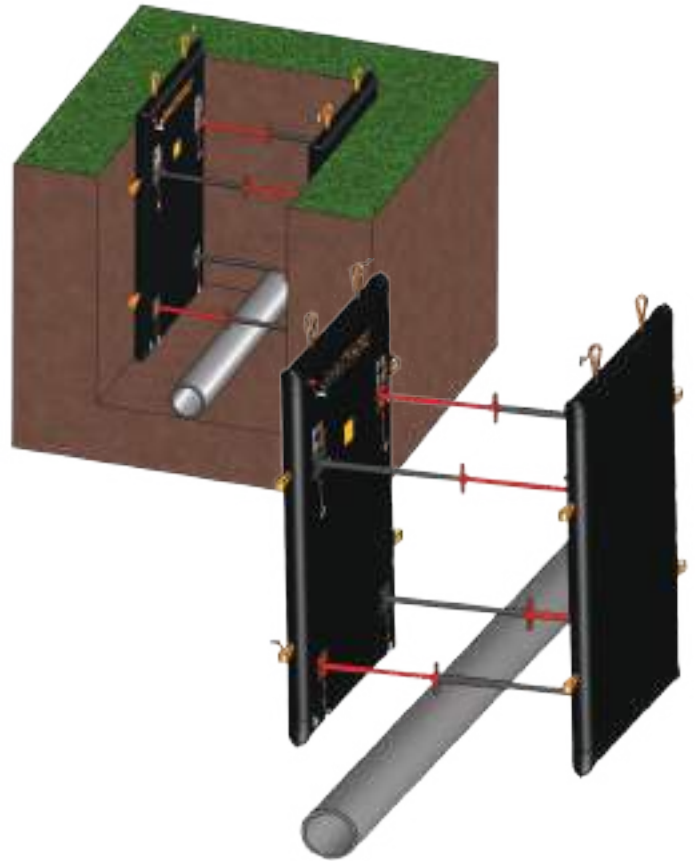
To secure

SMARTSHORE

When working in excavation sites, keeping workers safe is the top priority. SMARTSHORE is an inflatable trench shield developed by PRONAL as an alternative to more traditional and cumbersome shield options.

By this new technology, your workers will be able to quickly and easily secure a safe working area.

Once inflated and supported by struts, these shields reinforce trench walls and excavation sites of up to 2 meters deep, thus avoiding any risk of cave ins.



ADVANTAGE : the Smartshore concept

- **EASY TO TRANSPORT**

Foldable and lightweight (no vehicle required)

- **ROBUSTNESS**

Special double vulcanized fabric

- **MODULARITY**

Fits to different configurations

- **SAFETY**

Allow workers to escape the trench safely

- **QUICK TO INSTALL**

Only requires 20 minutes to set up without any lifting equipment



Smartshore®

// Technicals data

 To lift

 To store

 To plug

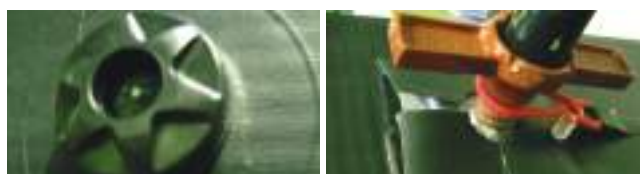
 To secure



SMARTSHORE BAG

Kit 2 or 4 inflatable cushions equipped with :

- 1 self-sealing quick coupling
- 1 safety valve
- 6 handling straps
- 6 strut pockets
- 8 bungee cords



Flat dimensions (mm)	Inflated dimensions (mm)	Size when rolled (mm)	Weight (kg)	Thrust resistance (kN/m ²)	Air volume (Litres)	Inflating pressure (bar)
2230x1420	2160x1380x125	200	13	12	400	1

ACCESSORIES FOR KIT OF 2 CUSHIONS



Accessories

Struts
(3 sizes available)

- 60/90 cm
- 80/110 cm
- 110/140 cm

2 cushions kit

x 4



Inflation line

x 1



"Venturi" ejector
for a quick cushion
deflation

x 1

Inflatable manhole formwork

// JB QUALIFIX®

 To lift

 To store

 To plug

 To secure

JB QUALIFIX®

The JB QUALIFIX® is an inflatable manhole formwork.

An alternative to heavy wooden or metal formwork, this solution is used for sealing cylindrical manholes.

What's more, its perfect seal protects the manhole chamber from any residue that might fall into it during the during concreting. This means that workers no longer have to climb down to clean it.



- 1 a carrying handle
- 2 an air vent plug
- 3 a pressure relief valve
- 4 an inflation coupler
- 5 double-layer reinforced section for contact with concrete

AVANTAGES

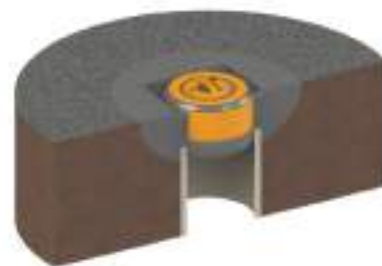
 Quick to install

 Lightweight

 Good value for money

 Prevents the risk of tools falling

CHARACTERISTICS MAIN FEATURES	
TYPE	Shutter/coffering
USE	Manhole formwork when sealing a manhole Preventing falls into manholes (man/tools/materials, etc.)
MATERIAL	Polyurethane
INFLATION PRESSURE	0.2 bar - Safety pressure : 0.3 bar
CONFECTION	High-frequency welding
ACCESSORIES (OPTIONS)	Small compressor Supply line



SAFETY

The JB QUALIFIX® helps to prevent the FME risk (risk of foreign bodies or products being introduced into the installations) by preventing operators and objects from falling into the inspection chamber.

Operators are therefore protected throughout the man-hole sealing process.



Inflatable gap filler

// Fall protection



INFLATABLE GAP FILLER

The gap filler is an inflatable solution integrated into the roof access gangways of all types of vehicle: train, bus, metro, tram or aeroplane. Once inflated, it fills the gap between the vehicle and the gangway during maintenance and/or manufacturing. In this way, it ensures the safety of operatives by preventing people and tools from falling out. As an alternative to rigid, its flexible material adapts to the shape of each vehicle without damaging it. It is made to measure according to the gap to be filled and the dimensions of your gangways.

AVANTAGES



High resistance



Easy to use



Anti-fall protection



Adaptable and made-to-measure

RIGID CUSHION VERSION

RIGID
PRESSURE 0.6 BAR
125 > 500 MM
1 > 10 M LONG
INFLATED WITH AIR

FLEXIBLE COIL VERSION

NOT RIGID
PRESSURE 0.14 BAR
200 > 500 MM
1 > 10 M LONG
INFLATED WITH AIR

APPLICATIONS



SCAFFOLDING
PROTECTION



AIRCRAFT
MAINTENANCE AND
MANUFACTURING



MAINTENANCE AND
MANUFACTURE OF
TRAINS AND METRO



MAINTENANCE AND
MANUFACTURE OF
TRAMWAYS

Notes



To plug

[illegible]

Notes



To plug

[illegible]



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