



Innovation at your service
www.pronal360.com

Industry & Maintenance

Products catalog



Lift



Store



Plug



Secure

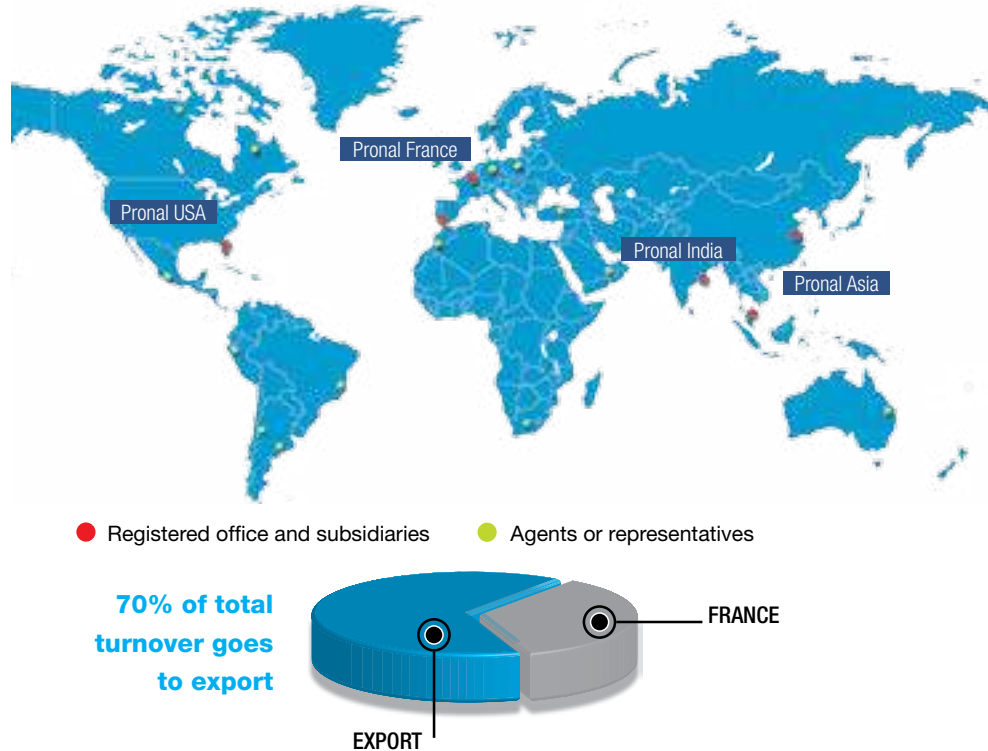


PRONAL

PRONAL is an industrial SME which for more than 50 YEARS has been applying and constantly refreshing its competencies in the design of flexible and/or inflatable structures made from **Elastomers, Plastomers or Composite materials**.

Its product range encompasses 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

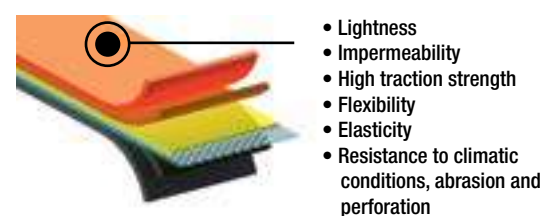


THE CORE OF OUR BUSINESS : the concept of flexibility

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**
Unceasing 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.



Solutions for your every requirement :

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

Our means

AN EFFECTIVE AND TAILORED SERVICE OFFER

based on constant innovation and an appreciation of your needs



Listening, understanding, designing

Our experts analyse your needs meticulously and methodically and deliver customised solutions.

- Dedicated Research & Development teams
- A highly skilled engineering and design office
- Use of state-of-the-art software
- Over 50,000 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
- The qualities of the technical fabrics used are continuously controlled, from design right through to deployment
- We have innovative and efficient means of assembly : vacuum, high-temperature vulcanisation, high-frequency welding, cutting machine etc.

Installing, training and advising


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







Editorial

Whether working onsite or off, PRONAL recognizes the problems day-to-day operation workers could face in conjunction to their activities, such as :

 **LIFT, MOVE,**
or maintain heavy loads

 **STOCK WATER,**
waste, or fuel for either long or short term

 **PLUG PIPES**
for maintenance or to contain fluids

 **PROTECT**
the environment and the people who work
with it daily

Here at PRONAL, we understand the time **when respecting deadlines and productivity are imperative**, there cannot be any room for miscalculations in the workfield.

For **50 years**, PRONAL has developed numerous partnerships with clients, **creating and improving products along the way** in order to formulate the perfect solution for our clients today. Through **PRONAL 360**, we propose a serie of flexible products dedicated **to lifting, storage, plugging, and protection**, all oriented towards the ultimate objective to work hand-in-hand with our customers to accomplish their projects in an :

“ EFFICIENT, RAPID AND SECURE MANNER. ”

With this catalog, we offer you the opportunity to discover PRONAL's solutions dedicated to the field of industry or maintenance, and feel free to contact us for products that fit your needs.

Yours Sincerely
François DESPATURES
PRONAL CEO

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To lift

PRONAL Flexible Structures are developed to lift, push, compress, or isolate objects in order to bring efficient solutions to industrial applications.

 **EASY**
to use

 **QUICK**
to set up

 **Lifting**
CONSTANT



CLC // Cylinder lifting bag

 Lift

 Store

 Plug

 Secure







Cylindrical

CLC

PRONAL Cylindrical Lifting Bag is used for lifting loads, machines 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	2 - 2.5	2.98	430	266
5T	112371	760	50	3.5 - 4	4.63	590	570
7T	112372	910	70	6 - 6.5	6.63	610	840
12T	112373	1220	100	12 - 13	11.92	1000	2475

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

Applications

- Vehicle maintenance
- Movement of machinery
- Loads turning over
- Constant and regular lifting of all loads
- Machines locking and holding

CLT // High-pressure lifting bag

 Lift

 Store

 Plug

 Secure



Non-sliding
surface

CLT

Due to its low weight and its thickness , **PRONAL high-pressure lifting bag** can be used in several fields as the construction, the industry,...

Alternative to hydraulic jack, **it offers 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	5
CLT 3	058157	200x200	25	1	3	115	12
CLT 6	058158	300x300	25	3	6	175	41
CLT 10	058159	380x380	25	4	10	220	84
CLT 14	058160	420x420	25	5	14	245	113
CLT 19	058161	510x510	25	8	19	295	203
CLT 24	058162	560x560	25	9	24	320	269
CLT 24L	058163	1000x320	25	9	24	215	227
CLT 30	058164	620x620	25	10	30	345	365
CLT 43	058165	750x750	25	15	43	410	365
CLT 54	058166	840x840	25	19	54	465	908
CLT 65	058167	920x920	25	22	65	515	1190

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

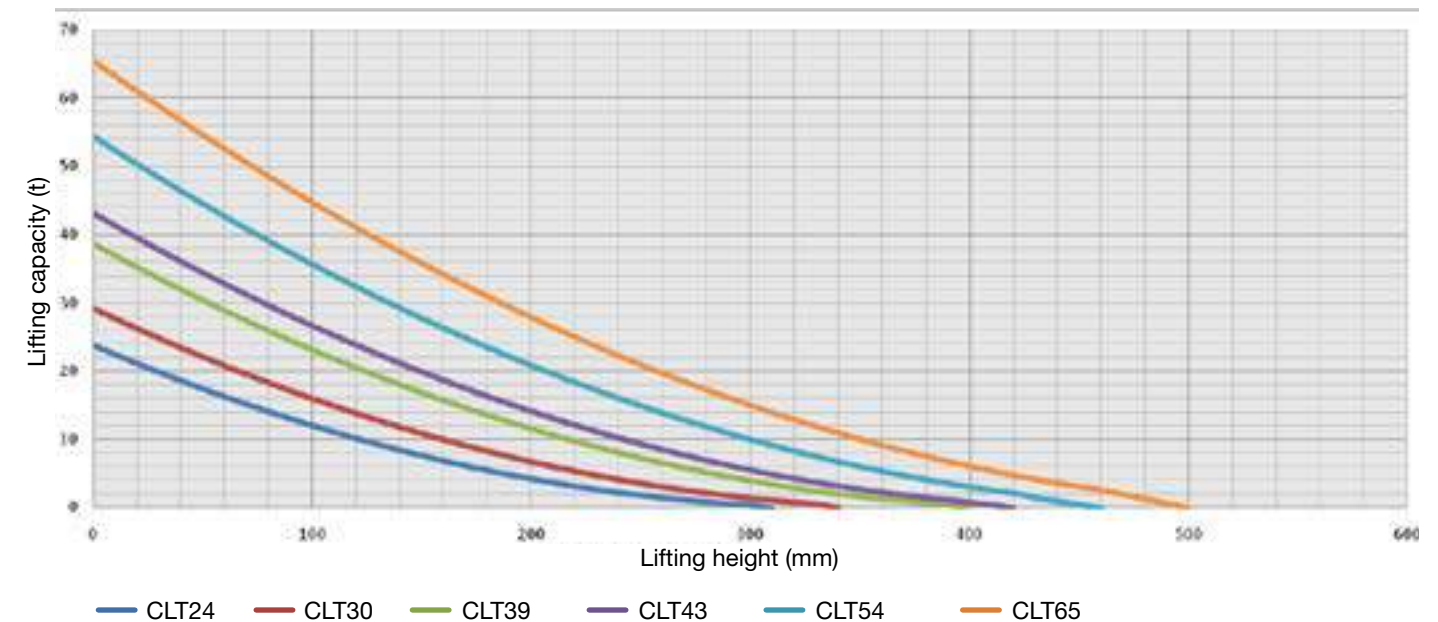
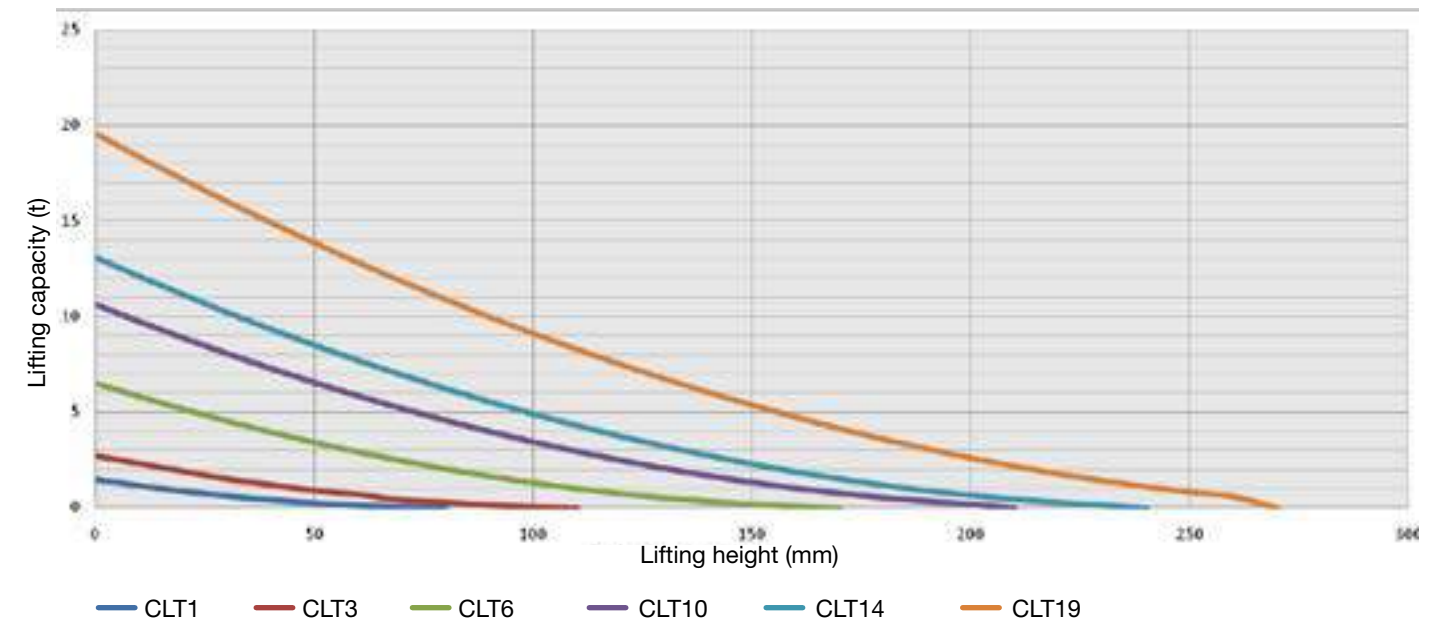
CLT // Technical data

 Lift

 Store

 Plug

 Secure



Applications

- Release trapped objects/persons
- Lifting or balancing heavy loads
- Vehicular maintenance
- Pipe leveling
- Moving and shifting machines or loads
- Mine and quarries

CPF // Platform lifting bag

Lift

Store

Plug

Secure






Flat top and bottom

CPF

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

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 LIFTING HEIGHT (mm)	AIR CAPACITY (l)
CPF 30/33	112929	560x560	25	11	31.4	170	32
CPF 38/42	111957	620x620	25	12	38.4	170	42
CPF 54/60	112930	750x750	25	18	56.3	170	68
CPF 68/74	112931	840x840	25	22	70.6	170	90
CPF 81/89	112932	920x920	25	26	84.6	170	112

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

Applications

- Emergency services
- Vehicule lifting
- Maintenance
- Release trapped objects/persons
- Machine height adjustments












Accessories

Lift

Store

Plug

Secure

	REF.	DESIGNATION	CLC	CLT	CPF
	67752	"Joystick" Deadman controller, plastic housing, 2 outlets 1/4", 10 bar			✓
	66908	"Joystick" Deadman controller, plastic housing, 2 outlets 1/4", 8 bar		✓	
	67753	"Joystick" Deadman controller, plastic housing, 2 outlets 1/4", 1 bar	✓		
	67754	"Joystick" Deadman controller, plastic housing, 3 outlets 1/4", 10 bar			✓
	67755	"Joystick" Deadman controller, plastic housing, 3 outlets 1/4", 8 bar		✓	
	67756	"Joystick" Deadman controller, plastic housing, 3 outlets 1/4", 1 bar	✓		
	67759	"Push button" Deadman controller, aluminium housing, 1 outlet 1/4", 10 bar			✓
	66907	"Push button" Deadman controller, aluminium housing, 1 outlet 1/4", 8 bar		✓	
	67760	"Push button" Deadman controller, aluminium housing, 1 outlet 1/4", 1 bar	✓		
	67757	"Push button" Deadman controller, aluminium housing, 2 outlets 1/4", 10 bar			✓
	66906	"Push button" Deadman controller, aluminium housing, 2 outlets 1/4", 8 bar		✓	
	67758	"Push button" Deadman controller, aluminium housing, 2 outlets 1/4", 1 bar	✓		
	67761	"Simplified" controller, 1 outlet 1/4", 10 bar			✓
	67192	"Simplified" controller, 1 outlet 1/4", 8 bar		✓	
	67762	"Simplified" controller, 1 outlet 1/4", 1 bar	✓		
	67763	"Simplified" controller, 2 outlets 1/4", 10 bar			✓
	67793	"Simplified" controller, 2 outlets 1/4", 8 bar		✓	
	67764	"Simplified" controller, 2 outlets 1/4", 1 bar	✓		
	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"	✓	✓	✓
	67751	Inflation hose, Yellow 5 m Universal coupler 1/4" + nipple 1/4"	✓	✓	✓
	67750	Inflation hose, Yellow 10 m Universal coupler 1/4" + nipple 1/4"	✓	✓	✓
	67187	Adaptor Claw Universal coupling	✓	✓	✓
	67188	Adaptor "Tête de chat" Universal coupling	✓	✓	✓
	67765	Shut off unit Universal coupler 1/4" + nipple 1/4"	✓	✓	✓
	66905	Pressure regulator 200 bar / 10 bar	✓	✓	✓

PSM // Submarine lifting bag

 Lift

 Store

 Plug

 Secure






Sturdy
hook system

PSM, Submarine lifting bag

The underwater parachutes provide additional buoyancy and to lift submerged loads.

Their **sturdiness** insures **security and efficacy within the operations.**

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 (m³)	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

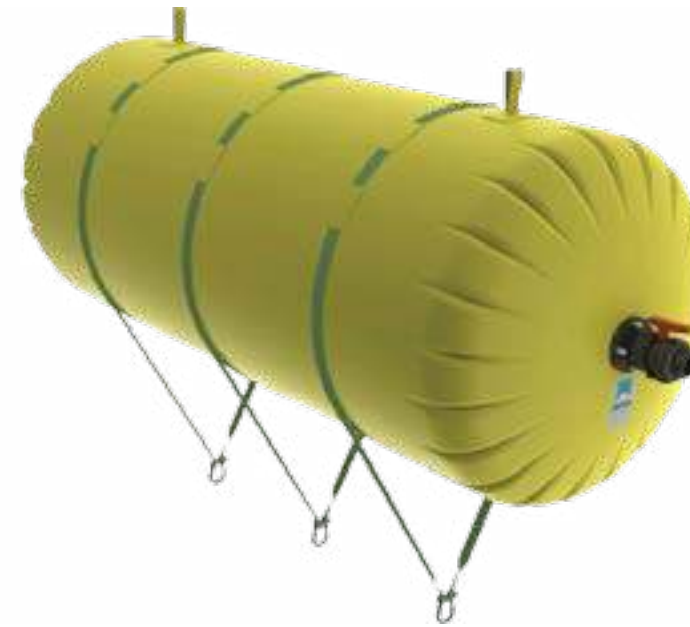
RDF // Litfing unit

 Lift

 Store

 Plug

 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	4	850	55	42

Other sizes on request

Applications

- Subsea stabilisation of charges
- Underwater lifting of charges
- Additional buoyancy in nuclear pool
- Holding of charges during offshore installation or maintenance

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Applications

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

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To store

Quick to install and requires almost no maintenance, PRONAL flexible tanks are the key for temporary or permanent storage of 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

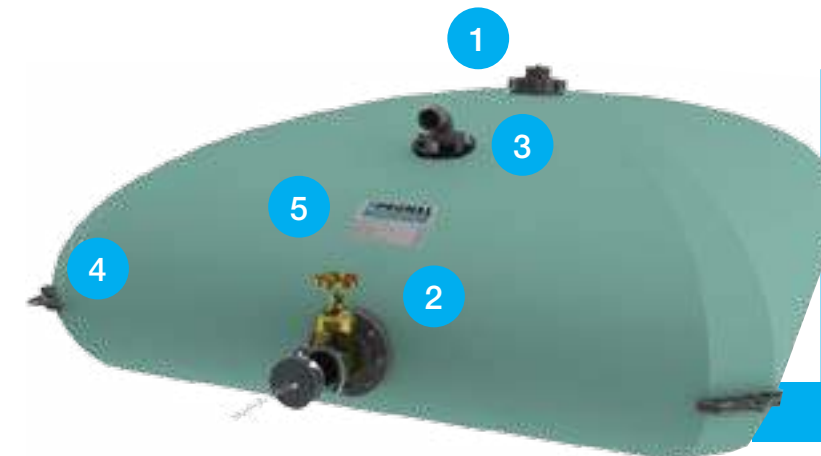
// Flexible storage tank

 Lift

 Store

 Plug

 Secure



*Details accessories mentioned in below table

Raw water storage

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

Thanks to various advantages, PRONAL tanks are the best solution to create temporary or long term water reserve.

Advantages

€ Low investment

 Easy & quick to deploy

 No evaporation

 No maintenance

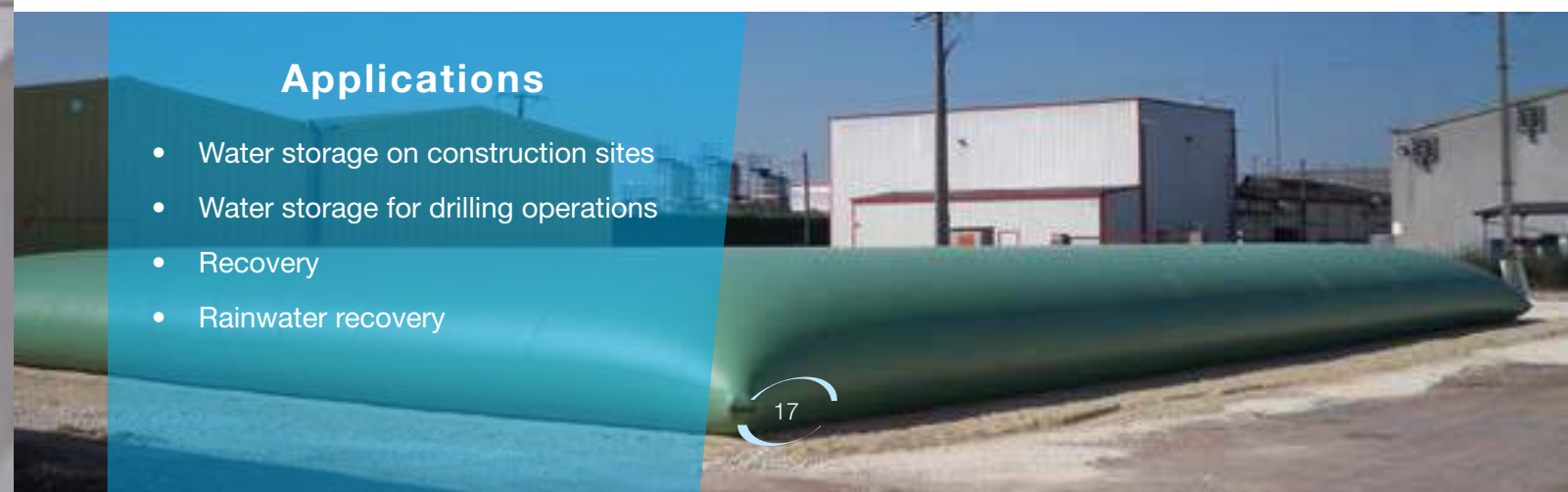
 No planning permit required

Volume (m3)	5	10	20	50	100	250	500
Reference	109833	109839	109842	109848	109855	109869	109875
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		5	10	20	50	100	250	500
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 marketing	x1	x1	x1	x1	x1	x1	x1
6	Repair kit	x1	x1	x1	x1	x1	x1	x1

Applications

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

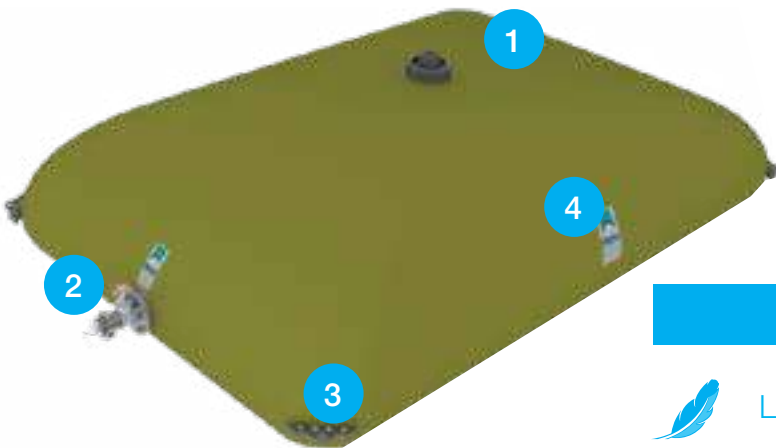


Drinking water storage

// Flexible storage tank



- Lift
- Store
- Plug
- Secure



Drinking water storage

For isolated construction sites or living quarters, it is often difficult and costly to the traditionnal drinking water network. Designed to meet several food grade certifications, **our tanks offer an optimal solution without altering the quality of the drinking water stored.**

Advantages

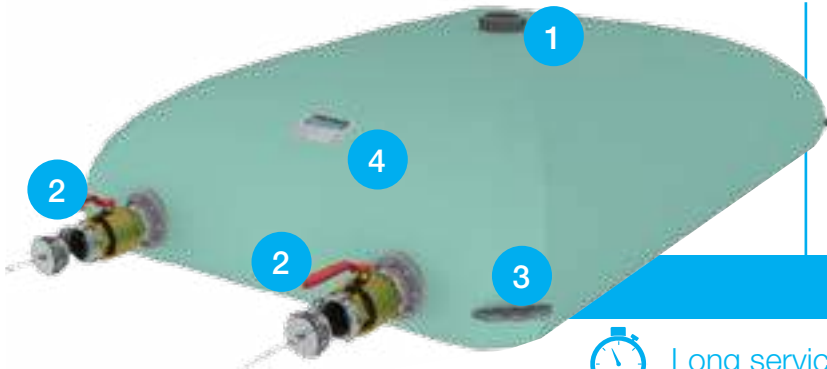
- Light and foldable
- Several food grade certifications
- Protected against external contaminations
- Resistant to hard climatic conditions
- Easy to clean

Volume (m³)	5	10	20	50	100	250	500
Reference	106904	106909	106912	106934	106944	106997	107003
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							
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 Corner plates	x4	x4	x4	x4	x4	x4	x4
4 Info marking	x1	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1	x1

Firefighting reserve

// Fire tank

- Lift
- Store
- Plug
- Secure



Firefighting reserve

PRONAL has developed a range of flexible tanks designed **to protect buildings from fire risks.**
Approved by the emergency response services and compliant with the current standards, PRONAL's fire tanks are the best solution **to secure infrastructures at a minimal cost.**

Advantages

- Long service life
- Useful capacity storage
- Adapted to fire brigade couplings
- Resistant to wheather conditions
- No structural work required

Volume (m³)	60	100	120	160	240	360
Reference	110813	110821	110825	110836	110844	110852
Dimensions (m)	6.42x9.80x1.4	7.49x12.77x1.5	8.56x13x1.5	9.63x14.78x1.5	12.84x15.81x1.5	14.98x19.5x1.5
Weight (kg)	170	293	298	428	541	777
Packing (mm)	1340x940x1080	1340x940x1080	1340x940x1080	1340x940x1080	2170x1260x1380	2200x1700x1000
Accessories						
1 Simple vent	x1	x1	x1	x1	x1	x1
2 Side inlet / outlet	1 x Ø3"	1 x Ø3"	1 x Ø3"	1 x Ø3"	1 x Ø3"	1 x Ø3"
3 Corner plates	x4	x4	x4	x4	x4	x4
4 Info marketing	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1
Options						
Top inlet 2" 1/2	110885	110890	110898	110909	110916	110922

Applications

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

Applications

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

Industrial storage

// Waste & effluents tank

Lift

Store

Plug

Secure

Lift

Store

Plug

Secure

Industrial storage

Designed and manufactured from **high-strength coated fabric, compatible with most of acidic or basic solutions**, PRONAL tanks are the ideal solution to ensure a safe storage minimizing your investments.

Advantages

- Waterlight solution
- Chemical compatible
- Odour free storage
- Temporary or permanent solution
- Foldable & movable

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

Volume (m³)	50	100	200	300	400	500
Reference	110975	110982	110994	110997	111000	111002
Dimensions (m)	6.42x8.76x1.3	7.49x12.77x1.5	11.77x14.69x1.5	13.91x17.82x1.5	16.05x20.94x1.5	18.19x23.05x1.5
Weight (kg)	152	257	461	660	894	1114
Packing (mm)	1235x820x960	1340x940x1080	1830x1040x1200	2170x1260x1380	2200x1700x1000	200x1700x1000
Accessories						
Man hole	x1	x1	x1	x1	x1	x1
Side inlet / outlet	2 x Ø4"	2 x Ø4"	4 x Ø4"	4 x Ø4"	4 x Ø4"	4 x Ø4"
Overflow	2 x Ø3"	2 x Ø3"	4 x Ø3"	4 x Ø3"	4 x Ø3"	4 x Ø3"
Corner plates	x4	x4	x4	x4	x4	x4
Info marketing	x1	x1	x1	x1	x1	x1
Repair kit	x1	x1	x1	x1	x1	x1

Fuel bladder

// Hydrocarbon storage

Hydrocarbon storage

From crude oil to Jet A1, PRONAL flexible bladders have been developed to **store in the best conditions, any type of hydrocarbons**.

Made out from high resistance material coated with elastomer hot vulcanized in an autoclave, PRONAL bladders are sont **recognized for years by several armies and 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	29353	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)	0.9x0.9x0.5	0.9x0.9x0.5	1.1x1.1x0.6	1.6x1.2x0.7	1.6x1.2x0.7	1.8x1.3x0.8	2.2x1.3x0.8	2.3x1.3x0.9
Accessories								
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"
Man hole	x1	x1	x1	x1	x1	x1	x1	x1
Overpressure vent	x1	x1	x1	x1	x1	x1	x1	x1
Info marketing	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

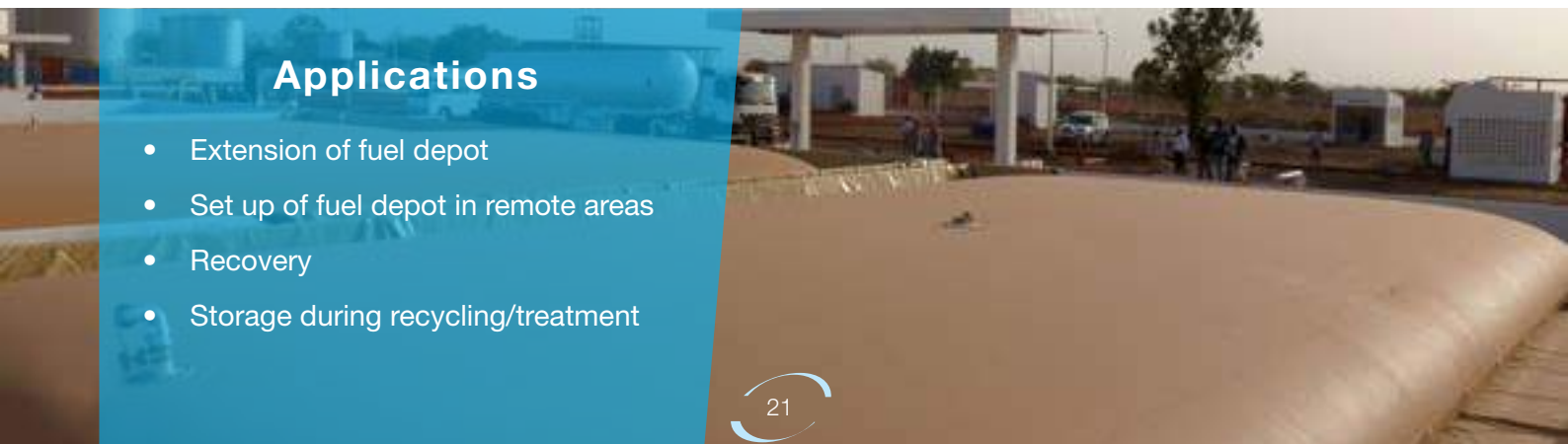
Applications

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



Applications

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



Other storage

 Lift

 Store

 Plug

 Secure

Self-supporting Opentank

- Self-supporting circular opentank
- From 1 m³ to 20 m³
- Easy above filling
- Easy & quick to set and to clean



Structural Opentank

- Structural circular opentank
- From 5 m³ to 120 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 feeding with aircrafts or helicopters
- Can be released at more than 10m high



Accessories

 Lift

 Store

 Plug

 Secure

WATER AND FUEL logistic



PUMP

- Petroleum products
- Other fluids



RETENTION POOL

- with framework
- inflatable



DISTRIBUTION

- Feeder
- Tap



HOSES

- Suction
- Repression



ADDITIONAL Equipment

UV COVER



HOSE BRACKET



LEVEL INDICATOR



SETTING & FORMATION



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

➔ **RESISTANCE**
high back pressure

➔ **QUICK**
to set up



Vari-Plug // inflatable pipe stopper

Lift

Store

Plug







Secure

Vari-Plug

Vari-Plug stoppers are developed to plug pipes whose diameter is ranging from 50 to 1200 mm.

With by-pass (ORJT) or not (ORJ), they allow pipe test, retaining back pressure up to 2 bars or more regarding the situations.

Advantages

-  Robust frame
-  Rapid installation
-  Excellent back-pressure resistance
-  Bypass option
-  Large chemical compatibility
-  Perfect sealing

	OD DIA (mm)	MIN SEALING Ø (mm)	MAX SEALING Ø (mm)	LENGTH (mm)	WEIGHT WITHOUT BYPASS (kg)	INFLATING PRESSURE (bar)	OPTIONNAL BY-PASS (mm)
ORJ ORJT							
50/70	45	50	70	250	0.5	3	
70/100	65	70	100	200	0.5	3	
100/200	92	95	200	350	0.9	3	20 (1/2")
150/300	145	150	310	510	2.5	3	20 / (1/2")
200/300	185	195	310	380	2.5	3	40 / (1"1/2)
300/500	280	295	510	570	5.5	3	40 / (1"1/2)
500/800	485	495	810	1010	17	3	40 / (1"1/2)
840/1200*	835	840	1200	1490	57	3	65 / (1"1/2)
MPS							
50/70	92	100	150	190	1.5	4	
70/100	130	130	170	190	1.8	4	
100/200	142	150	200	190	2	4	

* Refer to back-pressure dated / Page 27

Applications

- Waterproof tests
- Cleaning operation
- Temporary and permanent sealing
- Maintenance operation
- Conduct leak tightness test

3D-Plug // High pressure plug

 Lift

 Store

 Plug

 Secure









3D-Plug

3D PLUG stoppers are used to seal pipes of **any diameter ranging from 100 mm to 1000 mm by using just 3 models.**

Because of their durable material, PRONAL inflatable stoppers **are suitable for lines of all types.**

Advantages

-  Covers several diameters
-  Perfect sealing
-  Rapid installation
-  Bypass option
-  Safe handling
-  Good price-quality ratio











3D	OD STOPPER (mm)	MIN SEALING Ø (mm)	MAX SEALING Ø (mm)	LENGTH (mm)	WEIGHT WITHOUT BYPASS (kg)	INFLATING PRESSURE (bar)	Ø BYPASS (mm)
100/250	92	100	250	600	1.5	3	20 (1/2")
200/500	185	200	500	700	4	3	40 (1"1/2)
500/1000	485	500	1000	1275	16	3	40 (1"1/2)

* Refer to back-pressure datad / Page 27

Applications

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

Accessories

	REF.	DESIGNATION
	67761	"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"
	67751	Inflation hose, Yellow 5 m Universal coupler 1/4" + nipple 1/4"
	67750	Inflation hose, Yellow 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 20 for air test for ORJT 100/200 & 3D 100/250
	111731	Double bypass Ø 40 for air test for ORJT 200/300 - 300/500 - 500/800 & 3D 200/500 - 500/1000
	111485	Double bypass Ø 40 for water test for ORJT 200/300 - 300/500 - 500/800 & 3D 200/500 - 500/1000

Back-pressure (vari-plug & 3D Plug)

VARI - PLUG

*Valid values on steel tubes

REF	50	60	70	80	90	100	150	200	250	310	400	510	600	700	810	900	1000	1200
50/70	2.1	2																
70/100			2.3	2.3	1.9													
100/200						1.8	1.6	1.5										
150/300							2.3	2.1	1.8	1.8								
200/300								2.1	1.9	1.4								
300/500										2.2	2	1.1						
500/800												2.3	2.3	1.9	1.9			
840/120																2.2	2.1	1.3

3D PLUG

REF	100	150	200	250	350	400	500	600	700	800	900	1000
100/250	21	1.9	1.6	1.3								
200/500			2.3	2.3	2.3	2.1	2	1				
500/1000							2.3	2.3	2.1	2	1.5	1

Pollu-Plug

// Antipollution stopper

 Lift

 Store

 Plug

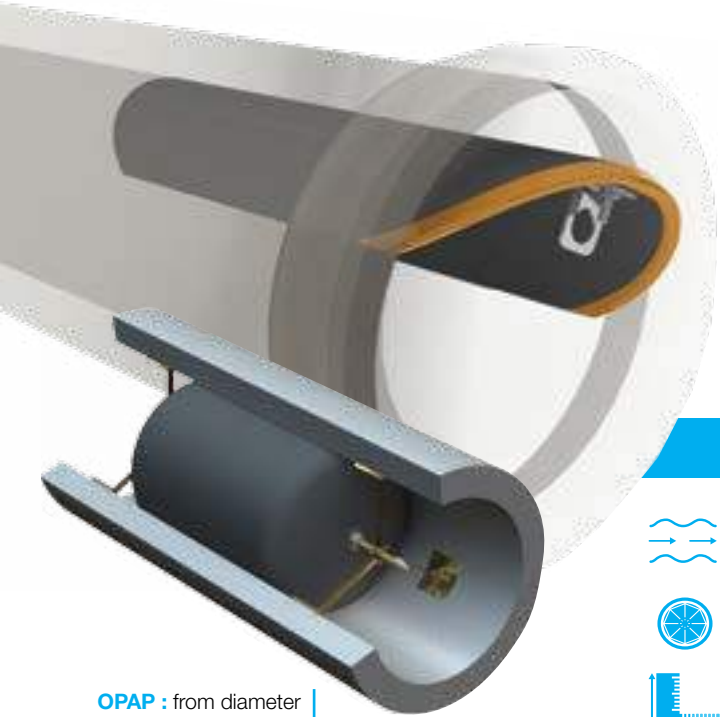
 Secure

 Lift

 Store

 Plug

 Secure



Pollu-plug and OFR

Pollu-plug Anti-Pollution Stopper was developed in the interest of environmental protection. Once inflated, it can **retain all kind of harmful fluid to avoid pollution.**

Permanently set-up in the top of the pipes, they are easily operable. Outbreak can be manual or remotely thanks phone or fire alarm.

Advantages

 Permanent installation without flow disturbances

 Immediate sealing

 Obstruction when deflated < 5%

 Complete security

 Most large chemical compatibility

 Easy & Rapid installation

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

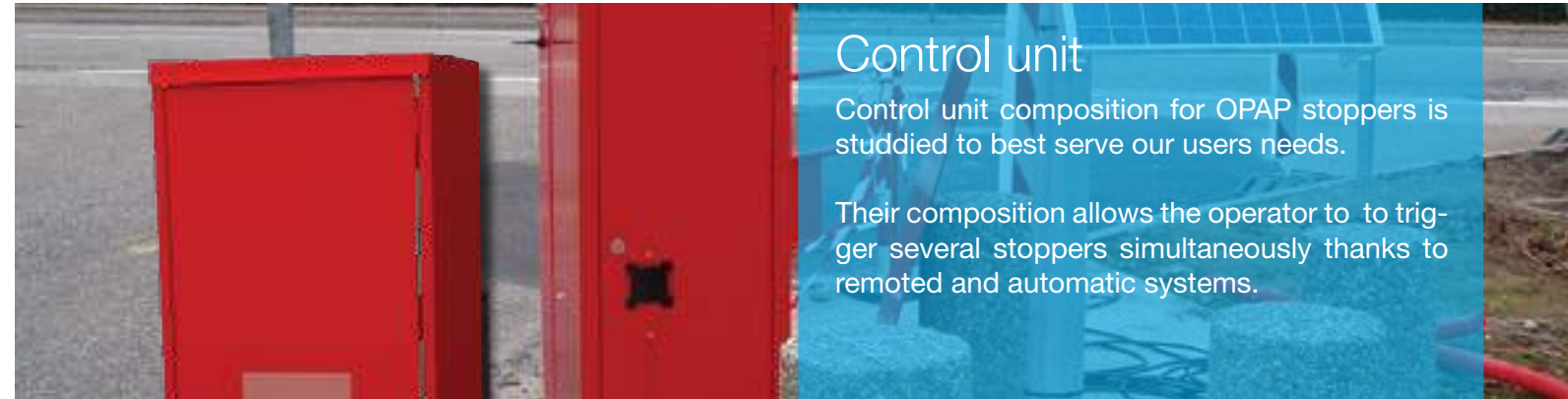
OPAP	DIAMETER (mm)	WIDTH-EMPTY (mm)	LENGHT-EMPTY (mm)	WORKING PRESSURE (bar)	STEM (G)
OPAP 150	150	230	550	1.2	1/4"
OPAP 200	200	300	550	1.2	1/4"
OPAP 250	250	380	600	1.2	1/4"
OPAP 300	300	450	700	1.2	1/4"
OPAP 400	400	600	800	1.2	1/4"
OPAP 500	500	750	1000	1.2	1/4"
OPAP 600	600	900	1200	1	1/4"
OPAP 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

Pollu-Plug

// Antipollution stopper



Control unit

Control unit composition for OPAP stoppers is studied to best serve our users needs.

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

Advantages

 Autonomous system

 Easy to use

 Custom composition

 Differents trigger options



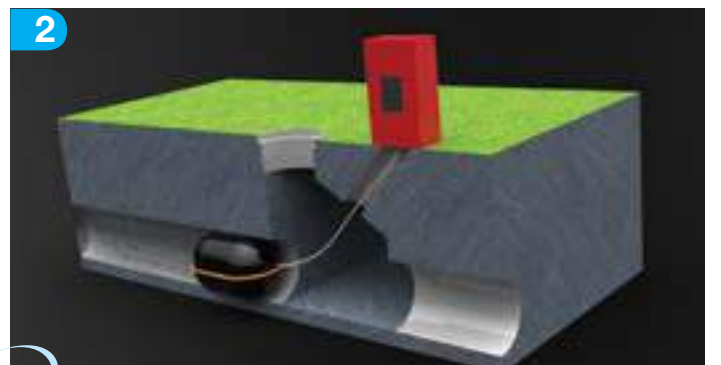
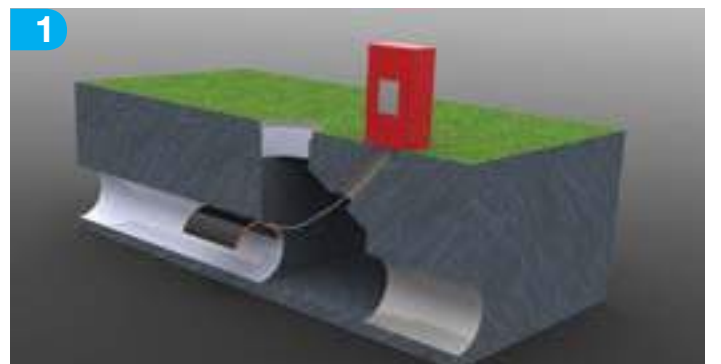
Control unit composition

SYSTEM OUTBREAK

- MANUAL :
- PUNCH OUTBREAK SYSTEM
- WIRED TELECONTROL
- MOBILE TELECONTROL

Picture 1 : Deflated stopper It can be triggered at any time. No outflow disturbances.

Picture 2 : Inflated stopper Immediate plugging of the canalisation. Once deflated, the stopper returns to its start position.



Other plugs

 Lift

 Store

 Plug

 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



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

To secure

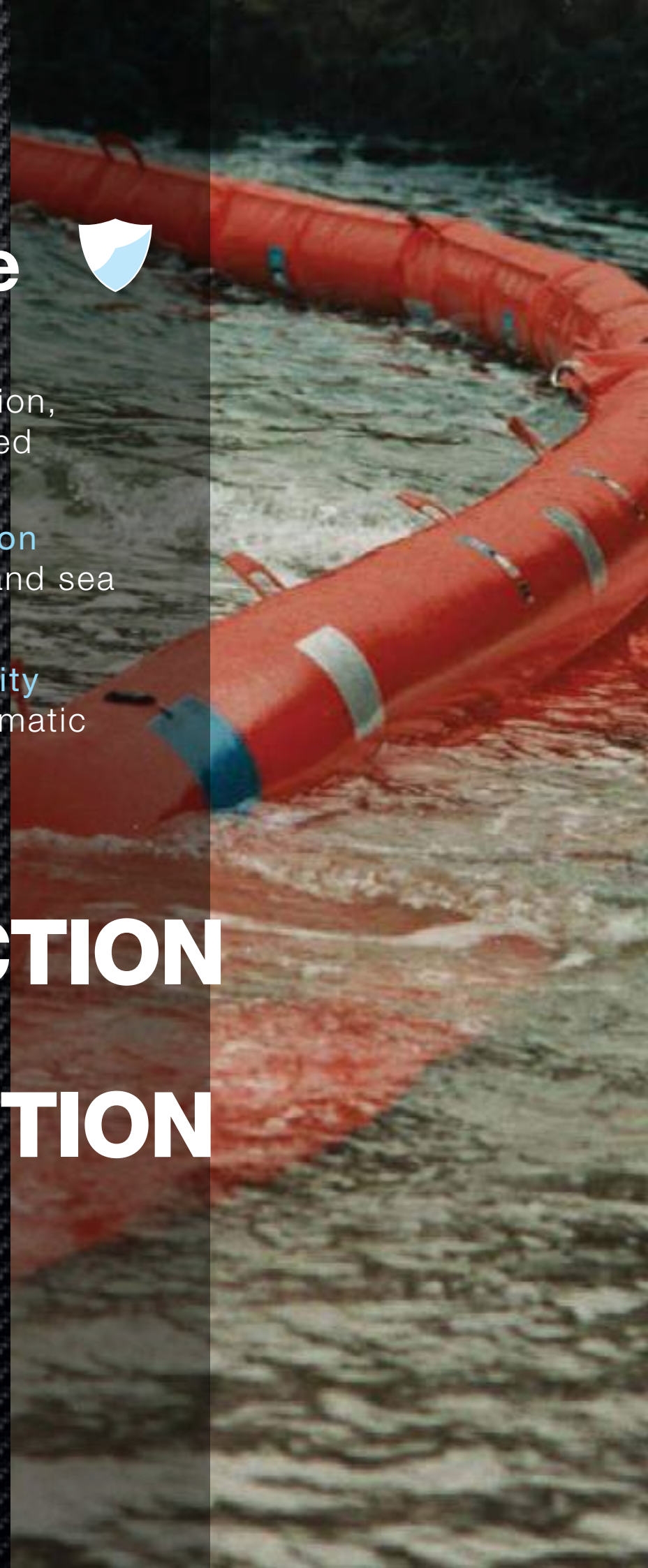
Whether its human or environmental protection, PRONAL has developed solutions dedicated :

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

 Human
PROTECTION

 Pollution
PREVENTION

 Environmental
CARE

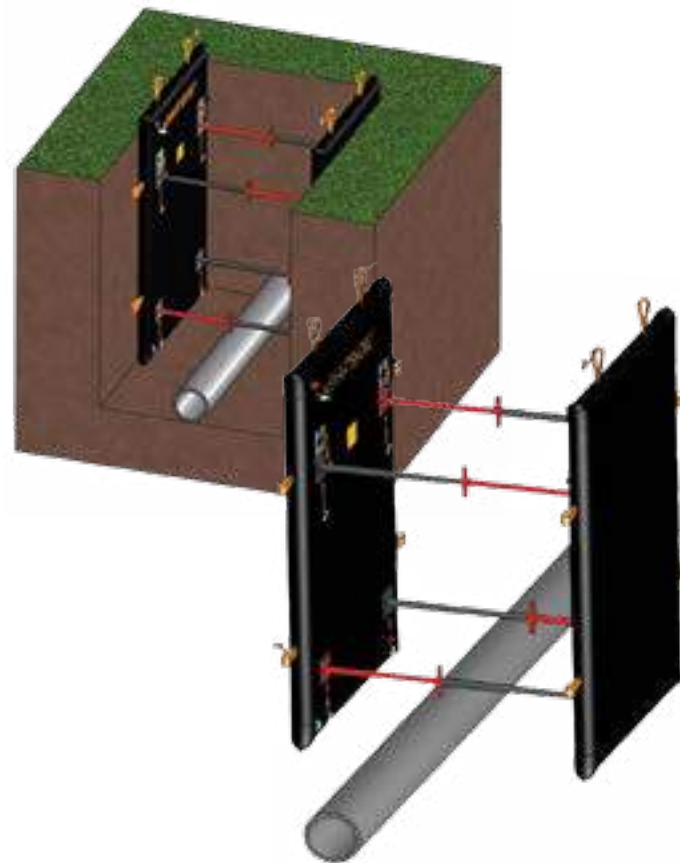


Smartshore

When working in excavations, securing the safety of workers is of highest priority. SMARTSHORE, inflatable trench shields developed by PRONAL is an alternative to the traditional use of heavy protection that is often difficult to set up.

By offering your team this new technology, you allow workers to quickly and easily secure a safe working area.

Once inflated and supported by struts, these cushions reinforce the trench walls and excavations of up to 2 meters. Any risks of landslides or burying are thus avoided.



Advantage : the Smartshore concept

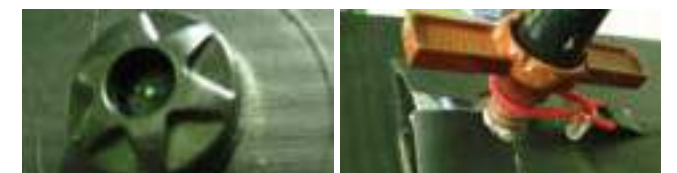
- **EASY TO TRANSPORT**
Foldable and lightweight (no vehicle required)
- **ROBUSTNESS**
Special double vulcanized fabric
- **MODULARITY**
Feets to different configurations
- **SAFETY**
Allow workers to escape the trench safely
- **QUICK TO INSTALL**
Only requires 20 minutes to set up without any lifting equipment



SMARTSHORE KITS

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/m²)	AIR VOLUME (Litres/nitres)	INFLATING PRESSURE (mbar)
2230x1420	2160x1380x125	200	13	12	400/600	650

ACCESSORIES FOR KIT OF 2 / 4 CUSHIONS



Accessories

Struts
(3 sizes available)

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



Inflation line



"Venturi" ejector
for a quick cushion deflation

2 cushions kit

4 cushions kit

x 4

x 8

x 1

x 1

x 1

x 1

Protectflood - BAPG

// Barrier



Balear - Fence

// Antipollution barrier



Lift

Store

Plug

Secure

Lift

Store

Plug

Secure



Protectflood

- Protect buildings from flooding
- Protection from major oil spill
- Contains chemical pollutants
- Temporary protection during construction and ditch cleaning

BARRIER	DIAM. (cm)	WATER RETENTION HEIGHT (cm)	LENGHT (m)	CONNECT.
MONO-TUBE BARRIER	75	65	10 ou 20	DN 50 (2")
BI-TUBE BARRIER	75	65	10 ou 20	
TRI-TUBE BARRIER	75	130	10 ou 20	

Other sizes on request

Advantages

Light to handle
unloaded

Self-supporting
system

Easy & rapid to
install

Feets to field
exigencies
(dimensions...)

Immediate sealing

Balear

- Divert spills from spreading bodies of water
- Contain pollution
- Protect the environment during boat dismantling

Advantages

Self floating
system
Keeps 75%
floatability even
with pierced
pockets

High resistance to
wind and swell

High resistance to
traction

Very quick
launching (1 from
2 m per sec)



BALEAR	EFFECTIVE DRAUGHT (m)	PLACES	LENGHT
BALEAR 410	0.28	Calm ports, Lakes	10,25 ou 50 m
BALEAR 312	0.35	Ports river, coves	
BALEAR 323	0.53	Coastal zones and open	
BALEAR 333	0.75	All coastal areas	

Other sizes on request

BAPG

Made of elastomer or plastomer coated fabrics

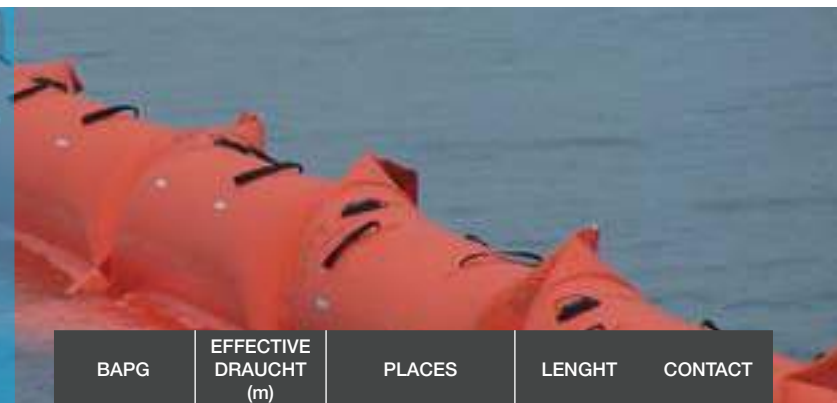
- Inflatable cylindrical float (L.10,20 m)
- Vertical skirt ballasted with galvanized chain
- Mooring handles, marks
- Wide range of models

Advantages

High resistance to traction

Easy and rapid cleaning

High resistance to wind and swell



BAPG	EFFECTIVE DRAUGHT (m)	PLACES	LENGHT	CONTACT
BAPG 150	300	Calm water	10 m	ART SF1 ou MonSun XII
BAPG 250	380	River	10 m	
BAPG 350	450	Harbor	10 m	
BAPG 470	700	Off shore	10 m	
BAPG 620	960	Deep sea	10 m	
BAPG 885	795	High deep sea	10 m	

Other sizes on request



Fence

- Longitudinal flexibility due to multiple foam cells
- Easy to deploy and quick setting up
- Possibility to store on reel
- Used for sweeping and pollution containment

Advantages

High resistance to traction

Easy and rapid cleaning

High resistance to wind and swell

FENCE	EFFECTIVE DRAUGHT (m)	TOTAL WEIGHT PER METER (kg)	LENGHT
FENCE 440	0.29	5	10,25 ou 50 m
FENCE 640	0.400	5	
FENCE 750	0.5	5	
FENCE 1250	0.75	10.5	

Other sizes on request

North America



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