PTA, PRF, PL E PF – POLES FOR METEOROLOGICAL, ANEMOMETRIC AND ENVIRONMENTAL APPLICATIONS (Rev.4 010326)

PTA, PRF, PL and PF poles are designed and built to mount instruments for meteorological, anemometric and environmental monitoring applications.

The majority of Geoves masts has a low weight and is modular to ensure greater ease of transport. Besides, certain models are provided with a special kit for the installation in the ground **without any civil works need**: in this way the installation activities are extremely easy and quick to do also in sites very difficult to reach or where it is not possible to do on-site civil works.

The pole structure is made of rustproof metals, typically galvanized steel or anodized aluminum or other corrosion proof material, as well as all accessories provided such as brackets, arms, etc...).

All poles are provided of base plate for soil or concrete platform or brackets for wall. The supplied accessories are chosen based on the kind of installation.

Advantages

- ✓ Modularity and easy transportability even in sites that cannot be reached by vehicles
- ✓ Easy installation and reduced execution times and costs
- ✓ No excavation or construction work (plinths, etc.)
- ✓ Mechanical robustness and reliability
- ✓ Easy to disassemble and move

Main applications

- ✓ **Small wind turbines** - Anemometric measurements
- ✓ **Weather stations**
- ✓ **Environmental monitoring** to understand the different layers of atmospheric turbulence (Pasquill classes)
- ✓ **Air quality monitoring**

PF3-55 Telescopic pole h=3m for hydrometric applications

PTAP10-80 Meteorological pole h=10m compliant to WMO for environmental monitoring applications

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Poles up to 3m

PF2-40 – Light pole h=2m with screw tip mounting (without civil works)

PF2-50 Pole h=2m with brackets for mounting on the wall

PL2-TREP – Light telescopic pole hmax=2.2m with tripod, fixing with ground stakes or concrete plugs

PF3-55 - Pole h=3m with base for fixing on the plinth or concrete pavement

PL3-TREP – Light telescopic pole hmax=4m with tripod, screw tip base and ground stakes mounting

PF3-TREP – Heavy pole h=3m with foldable tripod and mounting on plinth or soil

Technical features

Poles up to 3m Models	PF2-40	PF2-50	PL2-TREP	PF3-55	PL3-TREP	PF3-TREP
Heights (m)	2m	2 max 2 min	2.2m	2,7 max 2 min	3.9 max 1.9 min	3,5 max 2 min
Tyipical application	Fix or relocatable	Fix	Portable	Fix	Fix or portable	Fix or relocatable
Mounting	On soil without civil works	On plith or concrete wall	On concrete pavement or soil	On plinth or concrete wall	On soil without civil works	On concrete pavement or soil
Raising	No	no	no	Telescopic/manual		
Wind resistance	100km/h with gusts up to 130km/h@0...1000mslm and without ice load					
Diameters (mm)	40	50	33	Base: 55 Top: 50	Base: 40 Top: 30	Base: 50 Top: 45
Weight (kg) accessories excluded	4kg	6kg	4kg	11kg	10kg	20kg
Material	Galvanized steel					
N. of elements	1		2	2	3	2
Required workers for installation	1					

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Poles beyond 3m

PTAP6-80 – Pneumatic telescopic pole h=6m with tripod and sonic anemometer with on-board compass

PTAP10-80 – Pneumatic (aut. Or manual) telescopic pole h=10m for air quality monitoring shelter

PF4-55 - Pole h=4m with base for fixing on the plinth or concrete

PF5-55 - Pole h=5m with guy wires

PRBF10-110 - Pole h=10m, self-supporting, balanced-tiltable

Technical features

Poles >3m and for special applications Models	PF4-55 (PF5-55)	PTAP6-80	PTAP10-80	PRBF10-110		
Heights (m)	3,7 (or 5m) 2 min	6* max 1,8 min*	10* max 2 min*	10 max		
Tyipical application	Fix	Fix (with guy wires) or relocatable		Fix		
Mounting	On concrete plinth	Onto walls of metallic shelter or vehicles or indoor with flange for roof or portable tripod		On reinforced concrete plinth		
Raising	Telescopic manual	Pneumatic/Telescopic with manual pump or automatic air compression		Tiltable and balanced	Tiltable with ginpole	
Wind resistance	100km/h with gusts up to 130km/h@0...1000mslm and without ice load					
Diameters (mm)	Base: 55 (55)	Base: 80*	Base: 80*	Base: 170		

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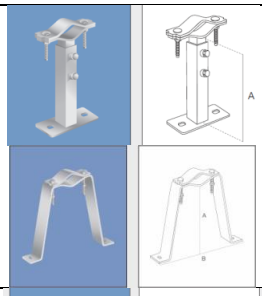
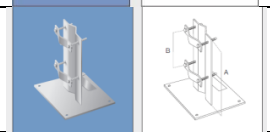
	Top: 50 (45)	Top: 60*	Top: 40*	Top: 70		
Weight (kg) accessories excluded	13kg (18kg)	12kg	23kg	170kg		
Material	Galvaniz.steel	Anodized Aluminum		Galvanized steel		
N. of guy wires	3@120°	3@120°	3@120°	None		
N. of elements	2 (3)	4	6	2		
Required workers for installation	1	1	1	1+self-propelled crane		

*** Note:** The dimensions marked with an asterisk are rough and can be adjusted based on specific application needs. Contact Geoves for details.

Important note: The poles shown above are sized to support a few kg of meteorological instrumentation. The assembly of other types of equipment with different shapes or weights is not allowed and must be evaluated case by case.

Accessories for pole mounting

Picture	Cod.	Description
	K2Sxx	Couple of brackets for tubular poles (PTAP and PF series) for mounting onto the wall (where xx=distance in cm from axis of pole and wall, max 43cm). **Important note**: for poles with h>4m and using the wall brackets K2S, it's necessary to use n.3 guy wires @ 120°; Geoves is not responsible for mounting done in different way.
	PBP30-90	Galvanized steel base plate for per ø30…90mm poles, dim:250x250x5mm, 4 holes ø14 mm for fastening on the concrete platforms
	SBA2	U-Bracket for 2 sensors/anemometers, L=80cm, U-bolts for pole mounting ø40…60mm
	SBA1	L-Bracket for 1 sensor/anemometer, L=40cm, U-bolts for pole mounting ø40…60mm
	SBS2D	Double Horizontal bracket x 2 sensors, L=100cm, U-bolts for pole mounting ø40…60mm
	SBS1D	Horizontal bracket for 1 sensor, L=50cm, U-bolts for pole mounting ø40…60mm
	SID120 SID75	Galvanized steel cantilever bracket, adjustable from 70 to 120cm (or fix 75cm), for sonic or radar hydrometer. Wall or pole mounting, with provided U-bolts ø40…70mm (other diameters on request)
	STF-UNI	Universal bracket for fastening of pyranometers, meteorological sensors and no contact hydrometers on horizontal or vertical poles ø24…44mm
	KIT-3T	Guy wires kit for poles from 4 to 10 m for fixing on vegetable soil (not rocky, gravelly, clayey, etc ...) consisting of three pegs, tie rods, thrust rings, clamps and thimbles

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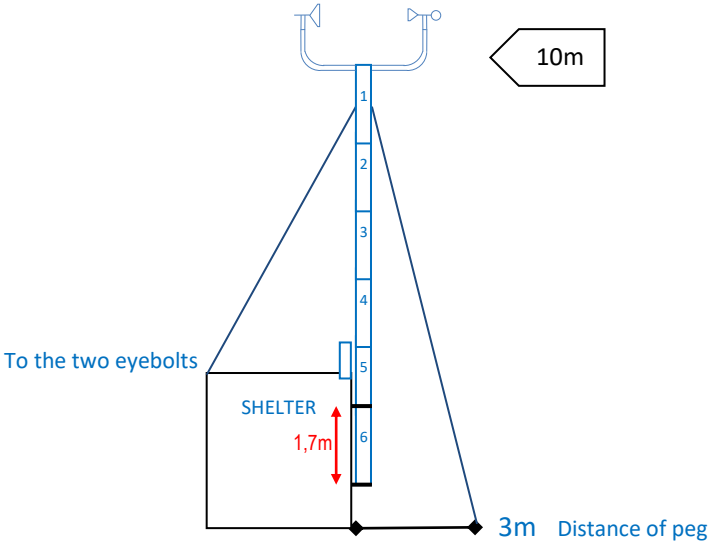
Configuration for poles PTAP h=6 and 10m, with guy wires and mounting onto a wall of a shelter (3 guy wires @120°: 2 to the eyebolts and 1 to the outside peg)



Picture 1 – Layout of pole mounting onto a metallic shelter

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