

# IMPRESSED CURRENT ANODES

## Open hole replaceable deep groundbeds

Document No.: 04-500-R1

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German Cathodic Protection



### uPVC Casing



These casings withstand external pressure loading which is caused by geological formation, the depth of the groundbed, the ratio of borehole diameter to casing diameter and the position of dynamic water levels.

Perforated casings are provided with slots which run perpendicular to the pipe axis for higher collapse resistance as compared to pipes having longitudinal slots.

The perforated (open) casings have a minimum of 20 % slotted surface for a low resistance increase factor.

Microfine PP wire mesh is durably fixed over the perforated area of the casings to prevent entry by silt or foreign particles after installation.

Both perforated and unperforated casing sections are supplied with threaded joints which allow quick assembly on site.

Rigid uPVC is chemically resistant against all types of groundwater, seawater, brines, diluted acids and alkalines.

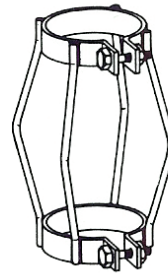
### Physical Material Properties

Properties	Value	Unit	Test method
Elasticity Modulus	2500 to 3000	N/mm <sup>2</sup>	DIN EN ISO 178
CHARPY-Impact Strength at 20 °C for uPVC; normal toughness	approx. 3 to 5	kJ/m <sup>2</sup>	DIN EN ISO 179
Density	approx. 1.4	g/cm <sup>3</sup>	DIN 53479
Tensile Strength	approx. 45 to 55	N/mm <sup>2</sup>	DIN EN ISO 527-2
Impact Resistance	max. 10 % breakage		Following DIN EN ISO 179
Vicat Softening Point, Temperature	80	°C	DIN EN ISO 306

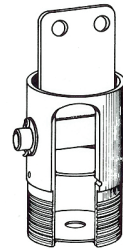
### Dimensions

Casing type	K	K	KV	K	KV
Nominal diameter ND (mm)	150	175	175	200	200
Outer diameter (mm)	165	195	195	225	225
Wall thickness (mm)	7.5	8.5	11.5	10.0	13.0
Outer diameter over socket (mm)	176	205	211	241	247
Collapse resistance (N/mm <sup>2</sup> )	0.7	0.6	1.6	0.7	1.5
Weight (kg/m)	5.5	7.4	9.8	10.0	12.8
Delivery length (m)	5.78	5.78	5.78	5.78	5.78
Thread (trapezoidal), DIN 4925	T	T	T	T	T

### Accessories



**Centraliser**  
for centralisation of casings in the borehole during installation



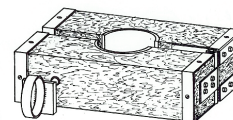
**Hoisting device with steel insert**  
for lifting and lowering the pipe sections



**Steel clamp**  
for fixing casing segments during installation



**Sealing plug**  
for the bottom end of the casing or sump pipe



**Wooden clamp**  
for fixing the casing to the top foundation

