



NEPRO UPVC CASING & SCREEN

**NATIONAL FACTORY FOR
PLASTIC PIPES & FITTINGS**

INTRODUCTION

The experience and success of the present day **Nepro** factory is based on its inception in 1968 to be the leading , specialized manufacturer and supplier of PVC, CPVC pipes and fittings.

Now, 30 years later, the name of **Nepro** is still associated with PVC products not only in the field of pipes and fittings for potable water and irrigation, but for the production and development of non-metallic PVC water well casing and screens.

Most ground water is aggressive and undergoes changes in chemical composition. Normally acids, bases and salts are the main causes of corrosion in metals coming into contact with ground water.

High costs, engineering difficulties, and the probability of adverse chemical reactions, make it impractical to overcome corrosion and encrustation through the use of protective coating, chemical treatment or cathodic protection.

Thus, the use of non-corrosion PVC for water well casing and screens rapidly received approval by the appropriate consultants and engineers.

PROPERTIES

Nepro manufactures UPVC pipes in accordance to German industrial standards DIN 8061, DIN 4925 and Saudi Standard draft no. 5584/5585 The pipes are designed for use as well casing and screens, for this reason the production methods and quality standards are solely adapted to the needs of water well constructions, the quality required for vertically installed casing and screens is higher than that for horizontally laid pipes as a casing or screen fracture can result in the loss of a well. Continues quality control also guarantees high product standard.

SIZES & STANDARDS

Nepro UPVC casing and screens are produced from virgin PVC compound to meet the required high quality standard in sizes ranging from 113-630mm outer diameter to comply with DIN 4925 parts I, II and III. Although special wall thickness according to Saudi standard draft No's 5584/5585 casing and screens can be produced.



MATERIAL PROPERTIES FOR WATER WELL UPVC CASING & SCREEN.

PROPERTIES	SPECIFIED VALUE	UNIT	TEST METHOD
Specific gravity	1.42	KG/CM ³	---
Notched impact strength	3.5	KJ/M ²	DIN 53453
Tensile stress at yield	45-55	N/MM ²	DIN 53455
Modulus of elasticity	2500-3000	N/MM ²	DIN 53457
Impact resistance at 23 ± 2 DEC. °C	Min. 90	%	DIN 53453
Heat reversion	Max. 5	%	DIN 8061
Thermal conductivity	0.15	W?KM	DIN 52612
Vicat softening Temperature	80	Deg. °C	DIN 53460 B
Surface resistance	10	Ω	DIN 53482
Water absorption	Max 4	Mg/CM ²	DIN 8061

Table 1

CHEMICAL RESISTANCE

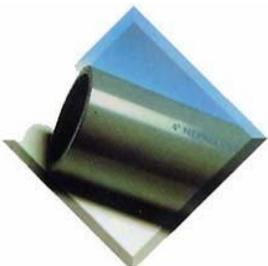
Nepro UPVC casing and screens are resistant to the action of the strongest acids, alkalis, ground and sea water, and any substances which are used during well construction, well disinfection and rehabilitation.

NEPRO UPVC CASING AND SCREEN ADVANTAGES

- Resistance to corrosioion
- Light weight and easy to transport.
- Easy to handle and install
- Non-Toxic
- Non conducting
- Low cost
- Can be installed to a depth of 500 meters.

COLLAPSIBLE STRENGTH

Nepro UPVC casing and screens have sufficient wall thickness to withstand the collapse pressure exerted by assessing gravel backfill and by the aquifer in which the screen is installed.



RANGE OF NEPRO UPVC CASING AND SCREEN

According to DIN 4925 part 1,11,111 and Saudi Standard Draft No. 5584/5585

● UPVC CASING AND SCREEN FOR WATER WELL. UPTO 100 METERS DEPTH

Nom O.D. mm	Internal Diameter, mm	External Diameter, On socked mm	No. Pipe W.T. mm Min. - Max.	Type of Thread	Collaps (σ) Resistanc for Casing Pipes Mpa
113	98	121	5.0 – 5.7	W	0.7
140	122	149	6.5 – 8.5	T	0.8
165	146	177	7.5 – 8.5	T	0.8
225	195	242	10.0 – 11.2	T	0.7
280	243	296	12.5 – 14.0	T / R	0.7
330	290	349	14.5 – 16.2	T / R	0.7
400	350	425	17.5 – 19.5	T / R	0.7
450	395	476	19.5 – 21.7	T / R	0.7
540	485	570	20.0 – 22.2	R	0.4
630	570	668	24.0 – 26.6	R	0.2

Table 2

● UPVC CASING AND SCREEN FOR WATER WELL. UPTO 300 METERS DEPTH

140	118	153	8.0 – 9.0	T	1.7
165	140	181	9.5 – 10.7	T	1.8
225	188	249	13.0 – 14.7	T	1.8
280	236	304	16.0 – 17.8	T / R	1.7
330	280	359	19.0 – 21.1	T / R	1.8
400	340	434	21.5 – 23.9	T / R	1.4
450	385	485	23.9 – 26.1	T / R	1.3

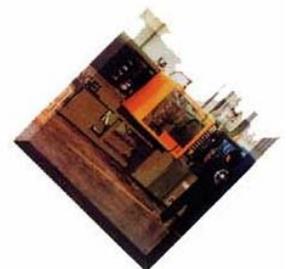
Table 3

● UPVC CASING AND SCREEN FOR WATER WELL. UPTO 500 METERS DEPTH

113	90	129	8.2 – 9.3	W	4.0
140	112	158	10.4 – 11.7	T	4.3
165	134	187	12.0 – 13.4	T	4.0
225	180	257	16.7 – 18.6	T	4.3
280	230	310	18.5 – 20.6	T / R	2.9
330	274	365	21.5 – 23.9	T / R	2.7

Table 4

N.B * Other types of thread can be supplied according to the client request.



TECHNICAL DATA FOR NEPRO UPVC CASING AND SCREEN

LENGTH: Nepro UPVC casing and screen are produced in 3,4 & 6 meter effective Lengths.



***COLORE: BLUE**

***THREAD TYPE:**

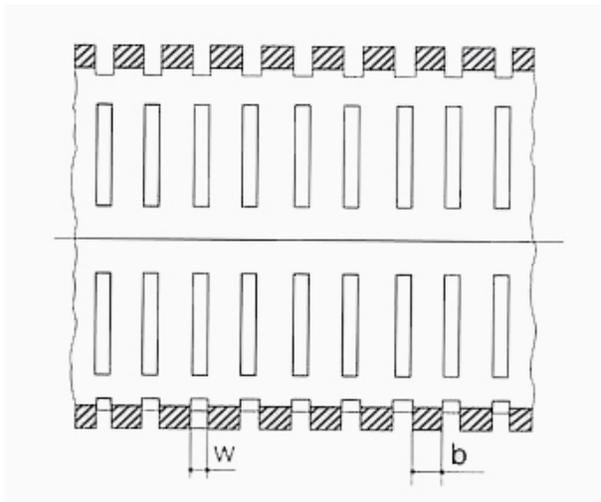
- Withworth (W)
- Trapezoidal (T) according to DIN 4925 parts I,II and III.
- Round thread (R) To work standard
- Trapezoidal round shoulder threaded (TR)
- Gas thread (G)
- Flush joint (TF/TRF)

***SLOT WIDTH AND OPEN AREA:** According to DIN 4925 part I,II and III as shone below:

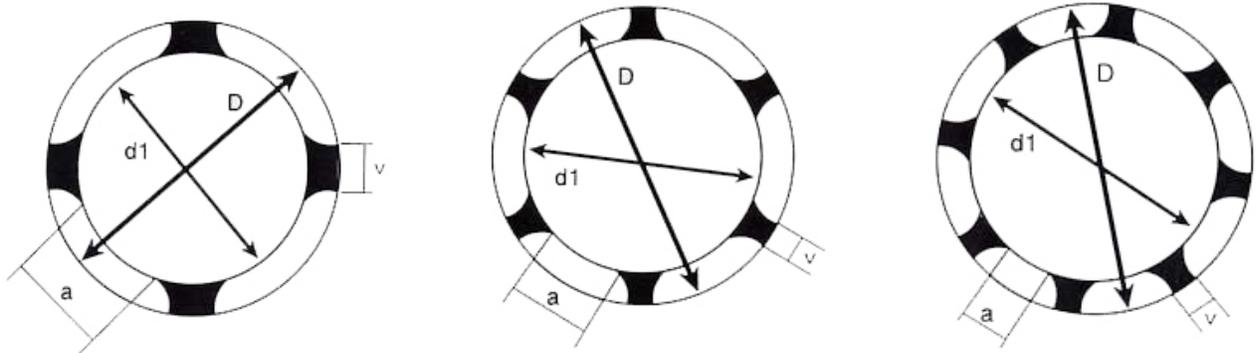
Slot width mm	0.3	0.5	0.75	1.0	1.5	2	2.5	3
AVG. open area4 %	4	6	9	11	16	20	22	25



NEPRO UPVC CASING & SCREEN SLOT ARRANGEMENT



a : slot length
w : slot width
b : Longitudinal pitch of slot
V : vertical pitch
D : outside DIA
d : inside DIA



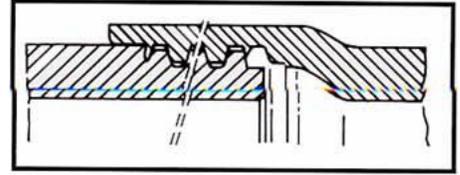
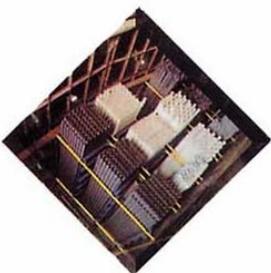
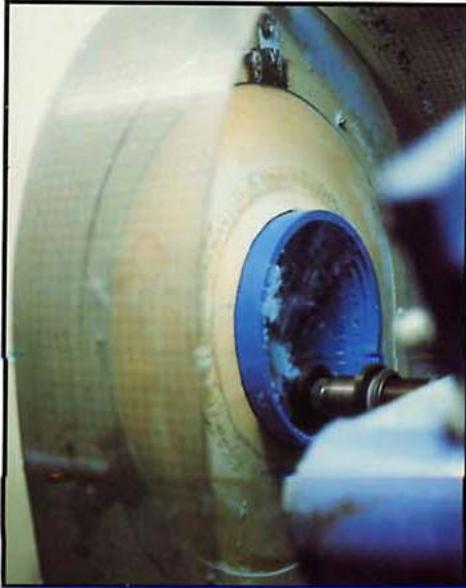
N.B. Open area slot Rows Numbers, depending on the pipe diameter and customer progress

JOINT

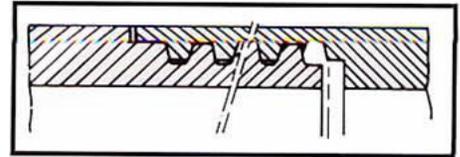
Each length is supplied with a male/female threaded socket as required by DIN 4925 standard, In addition to flush socket type.



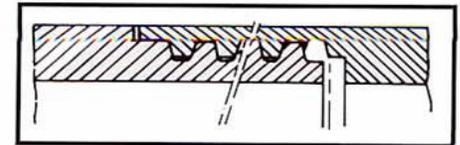
NEPRO UPVC CASING & SCREENS THREAD & SOCKET TYPE



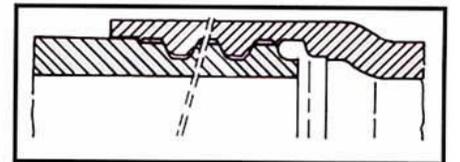
Trapezoidal thread DIN 4925 (T)



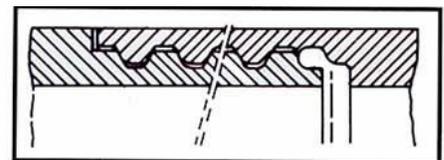
Flush joint trapezoidal thread (TF)



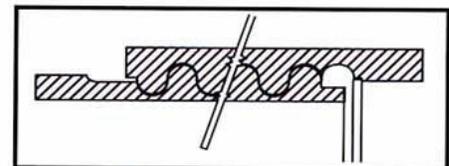
Flush joint trapezoidal thread (TF)



Trapezoidal round shoulder thread (TR)



Flush Joint with trapezoidal round shoulder thread (TRF)



Round thread (R)

SCREEN AND CASING ASSEMBLY

L2 is the effective pipe length, after assembly, the overall length.
 L1 being calculated by adding L2 to the thread length /3.

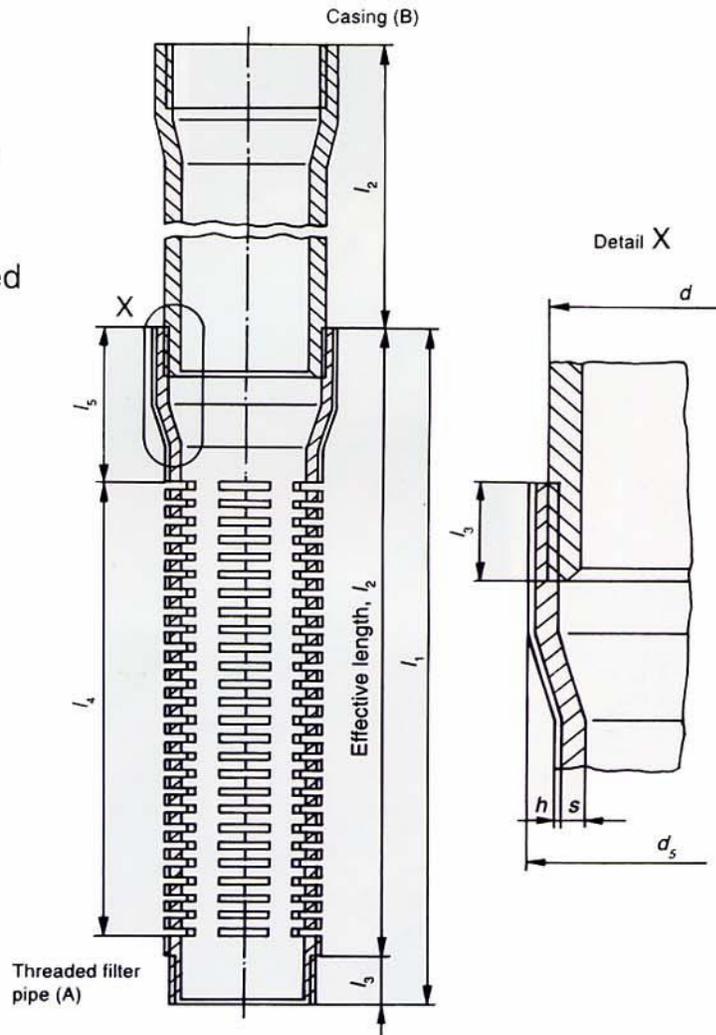
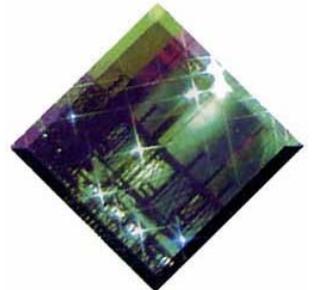


Figure 1: Screen and Casing assembly

L1 = Overall length (L2+L3)
L2 = Effective pipe length
L3 = Thread length

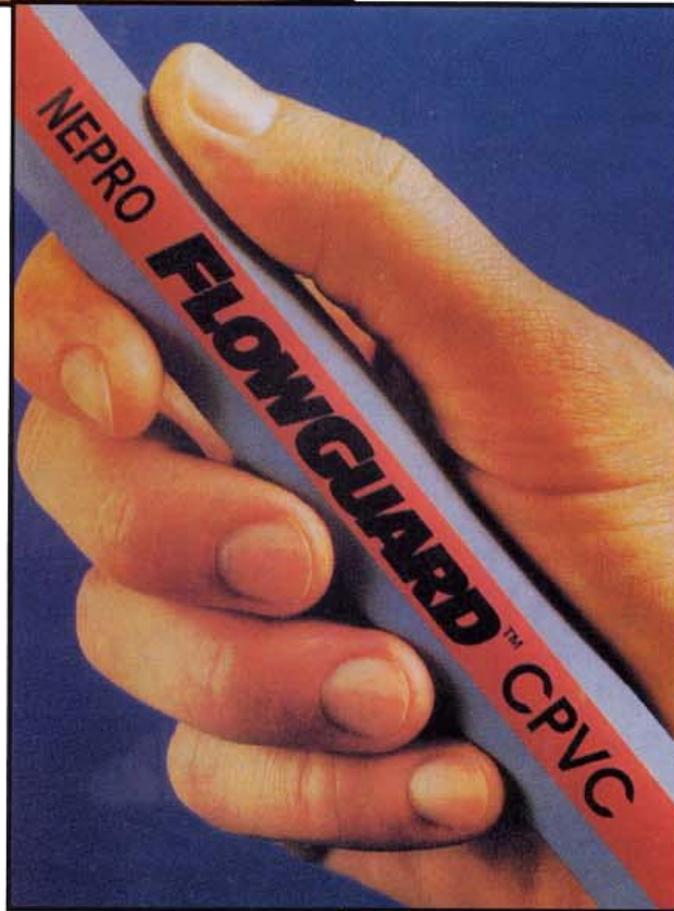
d = Outside diameter L2
d_s = Outside Socket diameter
S = Wall thickness



NATIONAL FACTORY FOR PLASTEC PIPES & FITTINGS



UPVC Pipes
& Fittings
according to
DIN , ISO,
BS & ASTM.



CPVC Pipes
& Fittings for
hot water
according to
ASTM.

UPVC Casing
& Screen
according to
DIN.





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الهيئة العربية السعودية للمواصفات والمقاييس

برنامج تسجيل أنظمة الجودة

شهادة تسجيل



منشأة مسجلة



شهادة رقم ١٤١٩/٠١٤

تشهد

الهيئة العربية السعودية للمواصفات والمقاييس أن

المصنع الوطني لإنتاج أنابيب وقطع البلاستيك (نييرو)

ص ب ٤٦٠ جدة ٢١٤١١ المنطقة الصناعية - المرحلة الثالثة

المملكة العربية السعودية

تطبق نظام إدارة جودة وفقاً لمتطلبات المواصفات القياسية

م ق س ٠ م ق خ ٠ أيزو ٩٠٠٢ : ١٩٩٤

الهيئة العربية السعودية للمواصفات والمقاييس

الحضور

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هذه الشهادة صالحة لمدة عامين من تاريخ التسجيل

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للمواصفات والمقاييس

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الهيئة العربية السعودية للمواصفات والمقاييس



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