شركة الصناعات الوطنية ش.م.ق
NATIONAL INDUSTRIES COMPANY Q.S.C
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WELLTUBE

WELL CASING & SCREENS

NIC Catalogues

NIC Products


Interlock & Yard Tiles


Limestone


Plastics


LED Lights


Dry Mortar


Cement Cladding Bricks


Ready Mix


Ceramics


White Blocks


Benches & Flower Pots

Paints


Cladding


Concrete Pipes

HDPE


NI Panels

NIC WELLTUBE

PVC Well casing and screens

One of the key attributes of PVC is its long life. PVC has ability to provide longevity across a massively wide range of differing environments. Key to this is PVC's resistance to oxidising substances. The same is not true of other well materials. Consequently, the life-cycle of PVC in the field is in the region of 50 years. If alternative materials are used in areas with high levels of corrosivity they may only have an operation life of a couple of years.

- NIC PVC Well casing and screens are produced from unplasticized poly vinyl chloride (uPVC) and they conform to ISO 7473 for chemical resistance.
- PVC well Screens and Casings are used in more than 100 countries worldwide, with demand rising considerably every year.
- NIC PVC well casing and screen are supplied with plain socket (PS) and threaded joints. These threaded pipes are easy to install in short reasonable time, no electrical welding on site like what is done for steel pipes.
- NIC PVC Well casings are produced according to international standard DIN 4925.
- NIC PVC Well casings are produced according to Quality procedures of BS EN ISO 9001:2015
- NIC PVC Well casing and screens have long life, smooth surface, corrosion and rust resistant even in salted water, reliable, easy to install and quality assured.

Properties

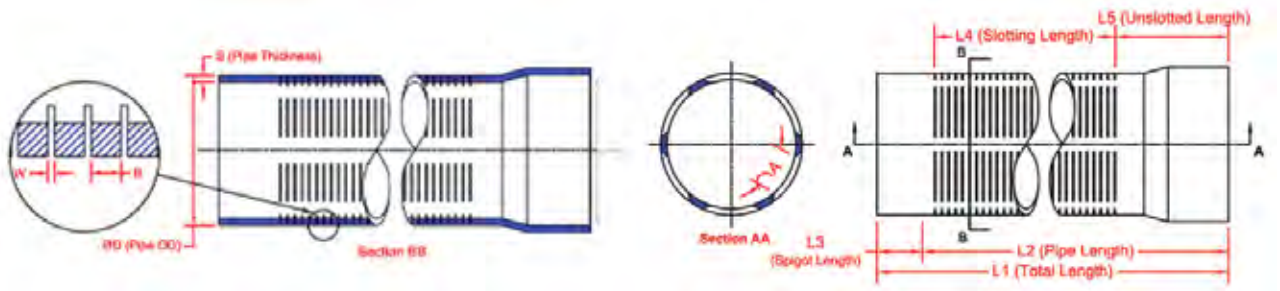
Produced from unplasticized polyvinyl chloride (uPVC) compound specially formulated for superior performance. Product confirms to international standard DIN 4925

Property	Unit	Value
Specific gravity	gram / cm^3	1.4 - 1.45
Flammability	Resistance	Self Extinguishing
Tensile strength	Kg / cm^2	≥ 450
Modulus of elasticity	MPa	≥ 2500
Impact strength Pendulum or Falling wt		Total Failure 10% of no of specimen (Max)
Vicat softening temp.	ºC @ 1Kg Load	80 (Minimum)
Co-efficient of linear Expansion	/ ºC	Approx 5 X 10^{-5}
Water Absorption	mg / cm^2	< 4
Specific heat	Kcal/ kg / ºC	≤ 0.25
Thermal conductivity	W / mK	Approx 0.15
Hardness	Shore D	80 – 90

Colour : Blue

Length : 3, 4 and 6 meters (effective length), other lengths upon request.

Technical Data



A. For water well upto 100 meters depth

øD Pipe OD	S Pipe Thickness	No of slots	Perforation Length mm ∑A ± 5%	Slot width (W) mm 1.5 +0.2 -0.0	2.0 +0.2 -0.0	3.0 +0.2 -0.0	Internal Diameter
				Open area as % of effective area			
165 +0.4 -0.0	7.5 +1.0 -0.0	6	285	8.5	11.0	13.5	146
225 +0.5 -0.0	10.0 +1.2 -0.0	6	390	8.5	11.0	13.5	195
280 +0.5 -0.0	12.5 +1.5 -0.0	6	450	8.0	10.0	12.5	243
330 +0.6 -0.0	14.5 +1.7 -0.0	6	530	8.0	10.0	12.5	290
400 +0.7 -0.0	17.5 +2.0 -0.0	8	640	8.0	10.0	12.5	350

B. For water well upto 300 meters depth

øD Pipe OD	S Pipe Thickness	No of slots	Perforation Length mm ∑A ± 5%	Slot width (W) mm 1.5 +0.2 -0.0	2.0 +0.2 -0.0	3.0 +0.2 -0.0	Internal Diameter
				Open area as % of effective area			
165 +0.4 -0.0	9.5 +1.2 -0.0	6	285	8.5	11.0	13.5	140
225 +0.5 -0.0	13.0 +1.4 -0.0	6	390	8.5	11.0	13.5	188
280 +0.5 -0.0	16.0 +1.6 -0.0	6	450	8.0	10.0	12.5	236
330 +0.6 -0.0	19.0 +2.0 -0.0	6	530	8.0	10.0	12.5	280
400 +0.7 -0.0	21.5 +2.4 -0.0	8	640	8.0	10.0	12.5	340

A. For water well upto 100 meters depth

øD Pipe OD	S Pipe Thickness	L3 Spigot Length	L5 Unslotted Length	L4 Slotted Length (±50)			Collapse Resistance MPa
				3 meters	4 meters	6 meters	
				With reference to effective Length L2			
165 +0.4 -0.0	7.5 +1.0 -0.0	62	170-200	2770	3770	5770	0.8
225 +0.5 -0.0	10.0 +1.2 -0.0	72	180-310	2760	3760	5760	0.7
280 +0.5 -0.0	12.5 +1.5 -0.0	88.5	220-250	2720	3720	5720	0.7
330 +0.6 -0.0	14.5 +1.7 -0.0	88.5	220-250	2720	3720	5720	0.7
400 +0.7 -0.0	17.5 +2.0 -0.0	88.5	240-270	2700	3700	5700	0.7

B. For water well upto 300 meters depth

øD Pipe OD	S Pipe Thickness	L3 Spigot Length	L5 Unslotted Length	L4 Slotted Length (±50)			Collapse Resistance MPa
				3 meters	4 meters	6 meters	
				With reference to effective Length L2			
165 +0.4 -0.0	9.5 +1.2 -0.0	62	170-200	2770	3770	5770	1.8
225 +0.5 -0.0	13.0 +1.4 -0.0	72	180-310	2760	3760	5760	1.8
280 +0.5 -0.0	16.0 +1.6 -0.0	88.5	220-250	2720	3720	5720	1.7
330 +0.6 -0.0	19.0 +2.0 -0.0	88.5	220-250	2720	3720	5720	1.6
400 +0.7 -0.0	21.5 +2.4 -0.0	88.5	240-270	2700	3700	5700	1.4

Note: The collapse resistance of screen pipe is approximately 50% to 70% that of casing pipe.

Accessories for Welltube

Top Cover

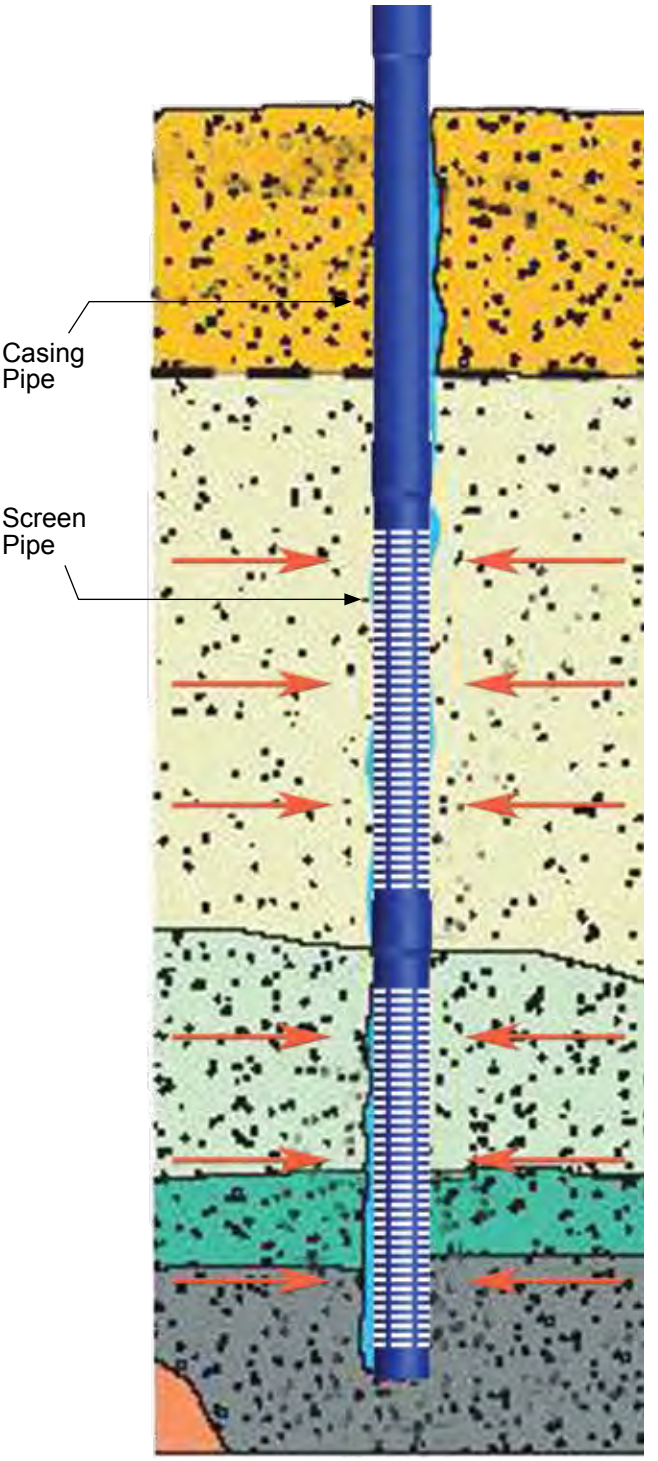
Drive Shoe

All Sizes Available

“NIC WELLTUBE” well casing & screens

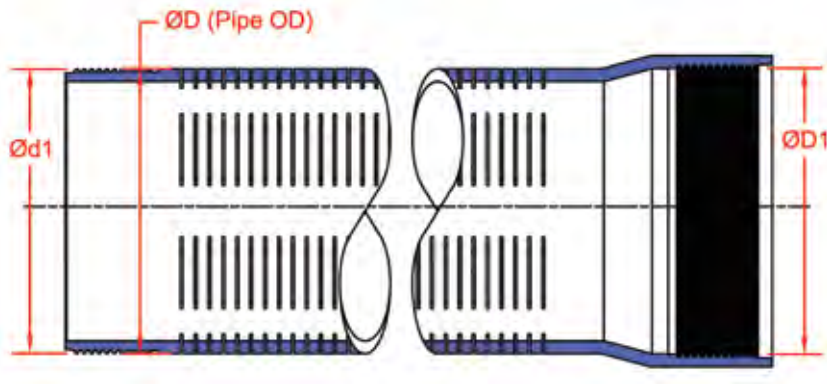
Well Tube Installation

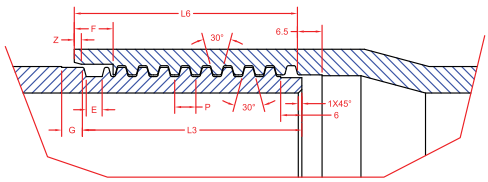
Assembly of Pipes



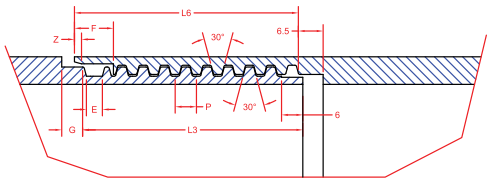
Welltube Installed

Threaded Joint for Welltube

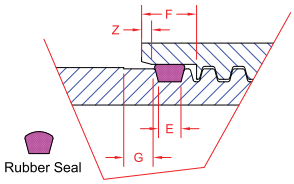




Socket type threaded joint



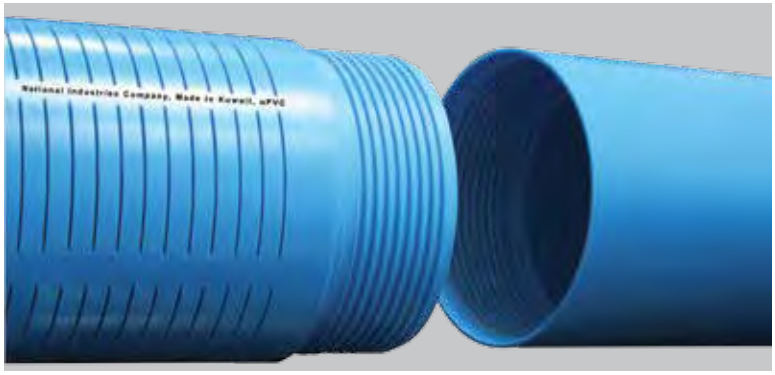
Flush Type Thread Joint



Locking or threads with rubber seal

Threads are as per DIN 4925

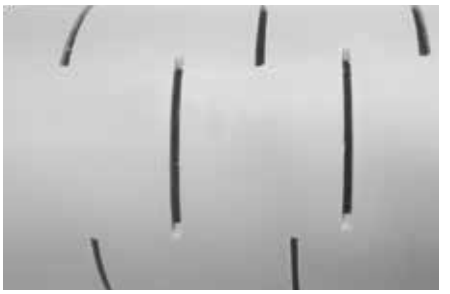
øD Pipe OD	d1	D1	L3 +0.0/-4.0	L6 +4.0/-0.0	P	E	F	G	Z
165	164.5 +0.0 -0.2	160.3 +0.2 -0.0	62.0	63.5	6	4.5	11	6	1.55
225	224.5 +0.0 -0.2	220.3 +0.2 -0.0	72.0	75.0	6	4.5	11	6	1.55
280	278.0 +0.0 -0.3	270.0 +0.3 -0.0	88.5	92.0	12	6.0	18	7.5	2.50
330	327.0 +0.0 -0.3	319.0 +0.3 -0.0	88.5	92.0	12	6.0	18	7.5	2.50
400	397.0 +0.0 -0.3	389.0 +0.3 -0.0	88.5	104.0	12	6.0	18	7.5	2.50



Flush type threaded joint

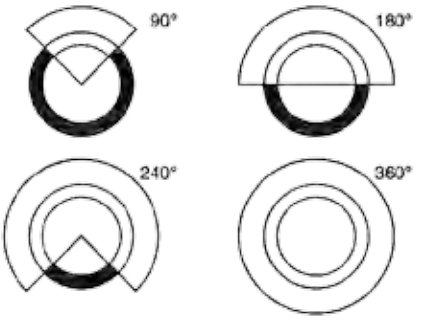
“NIC Plastics” Slotted PVC Pipes (Please refer NIC Drain Tube Catalog)

“NIC Plastics” Slotted PVC Pipes					
	Size (OD) of pipe mm				
	110	160	200	250	315
No. of slots on the circumference	4	4	4	4	4
Length of slots, mm	50	60	70	75	80
Width of slots, mm	2	2	2	2	2
Collection surface, cm^2/m	>60	>80	>100	>100	>100



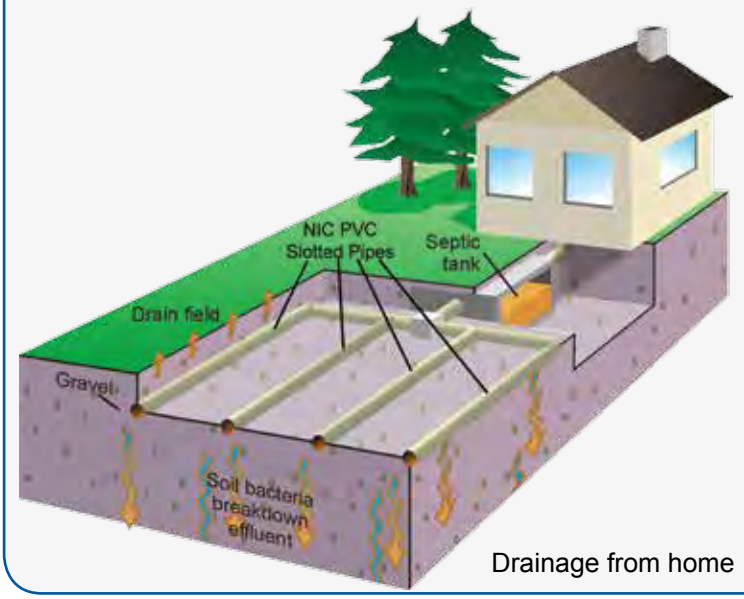
Drainage is essential for grounds where water infiltrations can produce heavy damage both in agriculture and in civil engineering projects. “NIC Plastics” uPVC slotted pipes are buried in the ground with different extent of permeability to collect and expel the water in excess. All slots have a width of 2mm, in order to avoid that some big elements can enter into the pipe - which could cause obstructions and a sensible decreasing of the draining function. “NIC Plastics” uPVC slotted pipes are made from uPVC formulated to give maximum compressive strength, stability and resistance to corrosion or chemical attack. Unlike steel pipes, it does not require painting & slots will not clogged up with corrosion. It is also safe to use with drinking water.

“NIC Plastics” uPVC slotted pipes are supplied with integrated socket suitable for solvent joint. Pipes having slots as per customer’s requirement can be manufactured on special orders.



Slotting Area as per customer’s requirement

“NIC Plastics” Slotted PVC Pipes



Drainage from home

Under the grass court of playground or Golf Course

In Farming Area

Drywells - For Storm Water Management

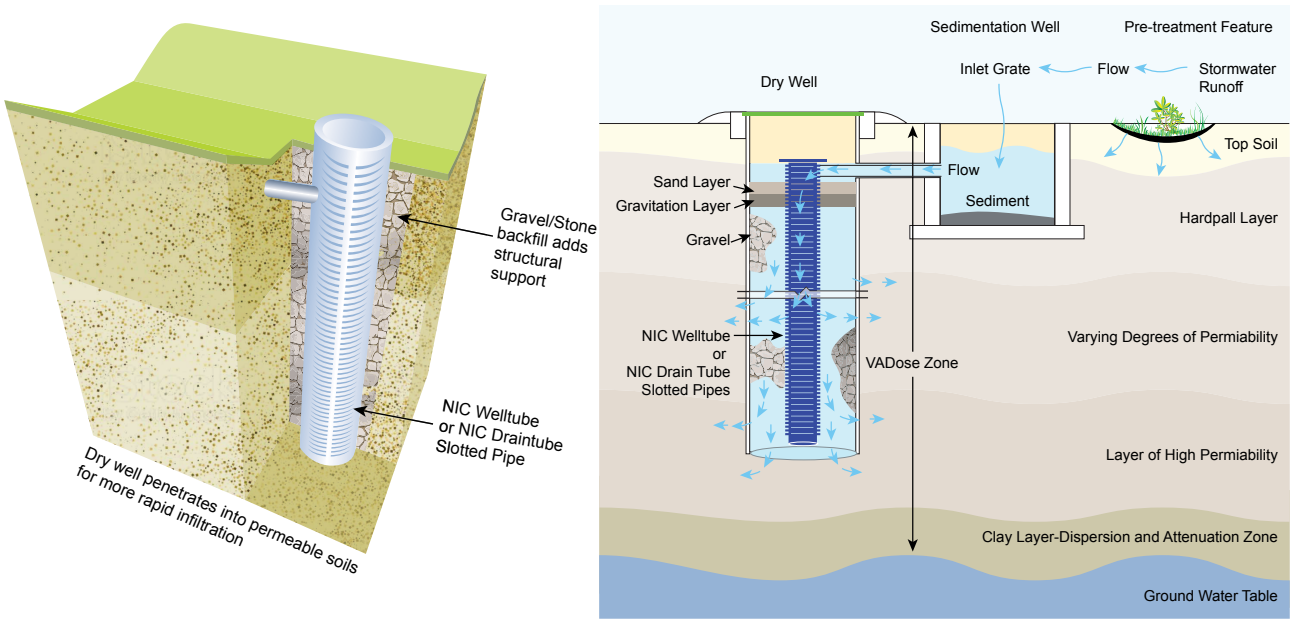
For storm water management

Drywells are gravity-fed, excavated pits with perforated casings used to facilitate stormwater infiltration and groundwater recharge in areas where drainage and diversion of storm flows is problematic.

Evaluate the potential of using dry wells, in combination with low impact development practices, to:

- Infiltrate stormwater runoff
- Alleviate localized flooding
- Recharge groundwater without negatively impacting groundwater quality

General Concept: Bypass Hardpall Layer



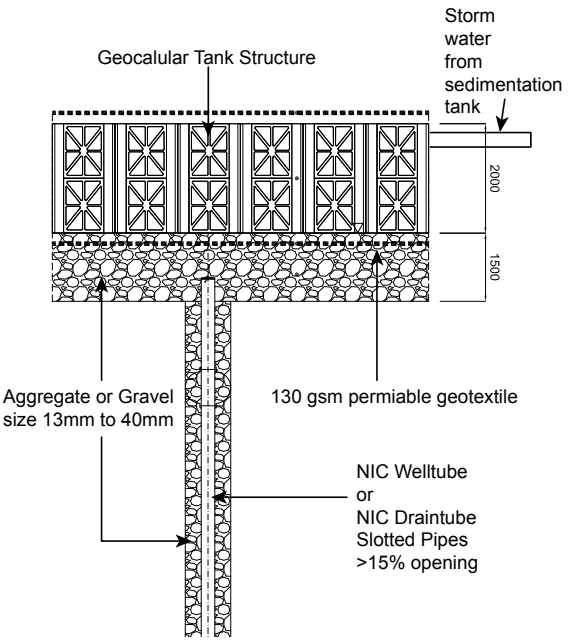
Typical Drywell installation without use of infiltration tank

Quick facts

- Dry wells have been used around the world for decades. They are used in Australia, Europe (e.g. UK and France), Asia (e.g. Japan and India), and the US.
- Dry wells are also known as soakaways, soakwells, and soak pits.
- Large dry well programs in USA (number of dry wells in state):
  Washington: 100,000 - Arizona: 52,000 - Oregon: 46,000 - California: 35,000

Guidelines for Drywell

1. For proper performance of Dry wells, it is recommended to remove sediment, hydrocarbons, and other pollutants by providing sedimentation system. (Susceptible to clogging by sediment)
2. These systems can be installed under parking lots and other developed areas, provided that the system can be accessed for maintenance purposes.
3. May not be installed on slopes greater than 20%
4. Drainage area to each dry well shall not exceed 100 sq.m.
5. Dry wells must be located down gradient of building structures and set back at least 5 meters from buildings, 15 meter from water supply wells and 10 meters from septic systems.
6. Soils shall be evaluated during excavation to evaluate soil suitability assumed in original design which may alter size / depth of well to be constructed.
7. Minimize compaction of dry well bottom and sidewalls
8. Sedimentation system should be cleaned and monitored periodically to keep debris from entering the dry well
9. During backfilling ensure that PVC slotted pipe remains in center, with inclination less than 1 % (should remain straight)



Typical Drywell installation with infiltration tank

Specifications for Dry Wells

Material	Specifications	Size	Notes
PVC Slotted Pipe	DIN 4262-1 for depth upto 30 meters. Min open area >15%	Outer diameter 110, 160, 200, 315 & 400mm	Please refer “NIC Draintube” for details
PVC Slotted Pipe	DIN 4925 for depth more than 30 meters	Outer diameter 165, 225, 280, 330 & 400mm	Please refer “NIC Welltube” for details
Excavation at site	Not suitable in soils with >30% clay or >40% silt	Minimum 10 meters deep. Diameter of excavation should be at least 3 times diameter of PVC pipe.	Soil shall be evaluated during excavation to evaluate soil suitability & to determine installation depth / diameter.
Gravel / Aggregate	ISO 19595 Washed Natural	Aggregate or round to sub round gravel - size 13mm to 40mm	Gravel is important to eliminate need of geotextile around PVC slotted pipe.
Sedimentation Tank	The goal of this tank is to maximize the removal of pollutants & reduce clogging of the dry well.	To meet expected water flow.	NIC can supply sedimentation tanks.
Infiltration Tank	The goal of infiltration tanks is to alleviate localized flooding	To meet expected water flow.	

Sales Outlet

Our Division at Abyat Showroom

Shuwaikh Industrial Area
Canada Dry Street
Abyat Showroom
Contact: 1848000

Working Hours*:
Saturday - Friday
8:00am - 10:00pm

Headquarter Shuwaikh

South Shuwaikh
intersection of Jahra Road
and the Airport Road,
Next to the
Red Crescent Society.

Tel: 24642100
Kuwait Hotline: 1844555

Working Hours*:
Sunday - Thursday
7:30am - 3:00pm

Sulaibiya

Tel: 24642200

Working Hours*:
Saturday - Thursday
7:30am - 3:00pm

Western Industrial Shuaiba

Tel: 24642300
Ceramics Factory:
23262714/10

Working Hours*:
Saturday - Thursday
7:30am - 3:00pm

Ceramics Showroom

Industrial Shuwaikh
Humaidhi Complex
Opposite to Bin Nisf Co.
Tel: 24950871/2
Factory: 23262714/10

Working Hours*:
Saturday - Thursday
9:00am - 9:00pm

Industrial Shuwaikh Showroom

Industrial Shuwaikh2
Block1 - Area 92
Al-Zaben Complex
Shops : 12,13,14
Tel. : 24642101/2/3/4/9
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For any sales inquiry: Fax: +965 24642063 - Email: sales@nicbm.com
* Working hours are subject to change according to holidays and occasions

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NATIONAL INDUSTRIES COMPANY (K.S.C.)

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