Flow Towards Prosperity

Duke® SAVE ENERGY PIPING SOLUTIONS

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DUKE PIPES PRIVATE LIMITED

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Duke SAVE ENERGY अट्ट UPVC COLUMN PIPE

IS 4985:2021 IS 15328:2003
IS 4984:2016 IS 12818:2010

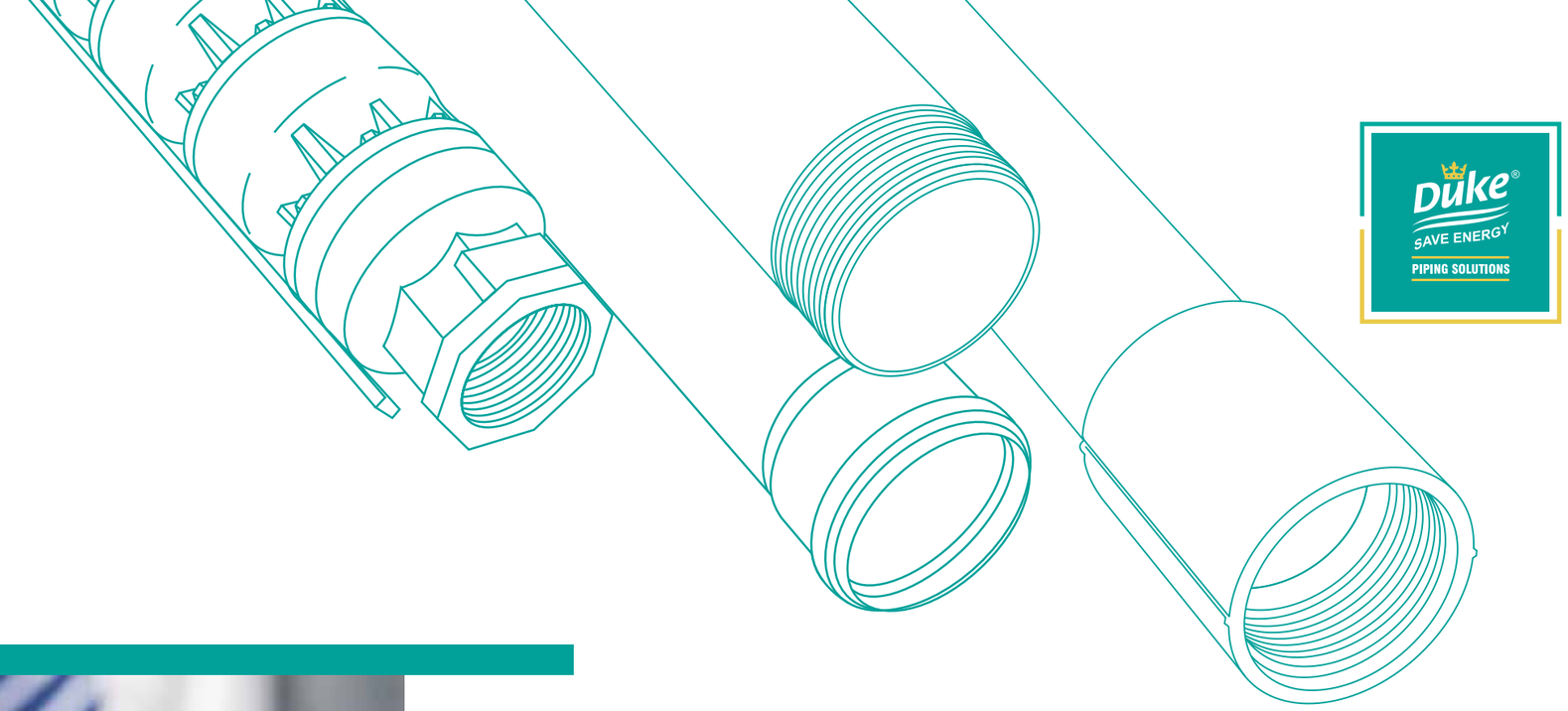
National Quality Award & Entrepreneurship Award Winner Company

ZED

TÜV SÜD

INSTALLING SOLUTIONS FOR EVERY PURPOSE

Being a leading manufacturer of pipes, we work on “You win, we win” policy which enables us to achieve great milestones. We are the one-stop shop for efficient piping solutions that you can always rely on.



COMPLETE PIPING SOLUTION

QUICK SERVICE & SUPPORT

LONG TERM PROSPERITY

WORLD CLASS INFRASTRUCTURE

UNCOMPROMISING QUALITY

HAPPY CUSTOMERS

TEAM WORK

SOCIALLY RESPONSIBLE

STRIVING TO BECOME AN UNBEATABLE HALLMARK OF SUCCESS

VISION

To be an eminent global brand providing complete, innovative, invincible quality piping paraphernalia under one roof.

MISSION

We are committed to manufacturing pipes which are in compliance with the best quality standards of the world. We strive to create an environment that nurtures youth and nourishes the experienced. On the bedrock of ethics, Duke is instituted by amalgamating the best practices & smart solutions.

VALUES

What keeps us grounded and on our toes is our value system. Bound by a code of ethics, we believe that we can only provide the best, when we follow what's best for us. The values that guide us are Trust, Ethics, Integrity, Discipline, and Performance.

The values that guide us are Trust, Ethics, Integrity, Discipline and Performance.

TEAMWORK MAKES THE DREAM WORK

Water is an indispensable element for every individual on earth. As pioneers in the pipe manufacturing industry, we believe that water must be made available to all, in every corner of the nation. We wish to be the medium through which fresh water flows so that people can lead better lives.

Duke Pipes Private Limited started on a small scale in 1998 to form a legacy built with trust. Today it has carved a niche for itself becoming a global leader in pipe manufacturing.

Enabling others to lead the lives of their dreams, Duke Pipes Private Limited offers a wide range of top-quality Plumbing, Drainage Solutions, Borewell, Water Transportation and Ground Water Recharge. We've succeeded in earning the trust of our customers mainly because of our constant endeavour to work in tandem with their needs and requirements. In addition, we implement the smartest pipe manufacturing solutions, supported by our technical expertise and two decades of experience.

Our organization's backbone is our team of experts who tirelessly work to provide the best results. We believe that only when they grow, can the company grow as well. We encourage all our employees and technical staff to attend as many seminars, workshops, and training sessions as possible so that they are aware of the latest developments in the industry and also aware of the current market scenario.

ENSURING QUALITY COUPLED WITH AFFORDABILITY

We set out to revolutionize the piping industry by retaining the quality and encompassing the factor of affordability. While many believe that both factors are difficult to achieve hand-in-hand, we worked immensely to turn the belief into reality by giving our customers what's best, remarkable and durable.

SUSTAINABLY STRONG

The basic of all fundamental human needs is water. And our team of experienced professionals work extremely hard to ensure that water reaches everywhere by providing durable and sturdy pipes. But in addition to looking out for people, we also ensure that our practices, in no way, harms the environment at any cost. Our pipes are made in a manner to elevate human life and excellence is something that we practice daily. Apart from exceeding our consumer's expectations, what we wish to do is help build an eco-system where the environment can thrive.

SOLUTIONS THAT SERVE THE FUTURE

Duke takes pride in delivering sturdy and reliable piping solutions to address all the needs pertaining to the water supply. **Our products are approved by National Bodies such as BIS, CIPET, RITES and SGS. Our product range includes high-quality uPVC Column Pipes, uPVC Casing Pipes, uPVC Pressure Pipes, uPVC Agri Pressure Pipes, HDPE Pipes, Sprinkler Pipes, UDS Pipes and various types of PVC fittings.**

uPVC Column Pipe

uPVC Casing Pipe

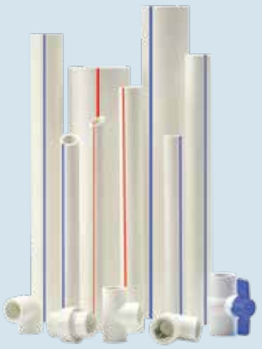
Sprinkler Pipe

Accessories

Underground Drainage Pipe

HDPE Pipe

uPVC Pressure Pipe



uPVC Plumbing Pipe

DELIVERING INNOVATION. CREATING IMPACT. ENSURING QUALITY.

At the very core of our company's soul, lies our commitment towards providing quality and efficient plumbing and drainage systems.

At Duke, we make quality our utmost priority. We, therefore, adhere to the most stringent quality checks at every stage of our production process. Every pipe at Duke undergoes an array of durability tests to ensure that they meet the highest safety standards. Quality Assurance at Duke is backed by a team of well-qualified and well-trained engineers. Their immaculate inspections & judgments are well complemented by our high-performance raw materials which go into making our top-notch pipes.

In addition, stringent quality tests are also carried out on all our raw materials to test their resilience and stability. Our fully automatic testing laboratory confirms the quality of the pipes that would be dispatched to our clients.

Certified inspecting agencies such as BIS, CIPET, RITES and SGS also come for regular inspections to guarantee that we deliver the highest level of quality. We strictly adhere to the various national & international norms & standards like ISI, ASTM, CE, BS, DIN, AS/NZ and ISO. The special cell for SPC and SQC in our quality control section analyses day-to-day data to help us create best quality pipes.

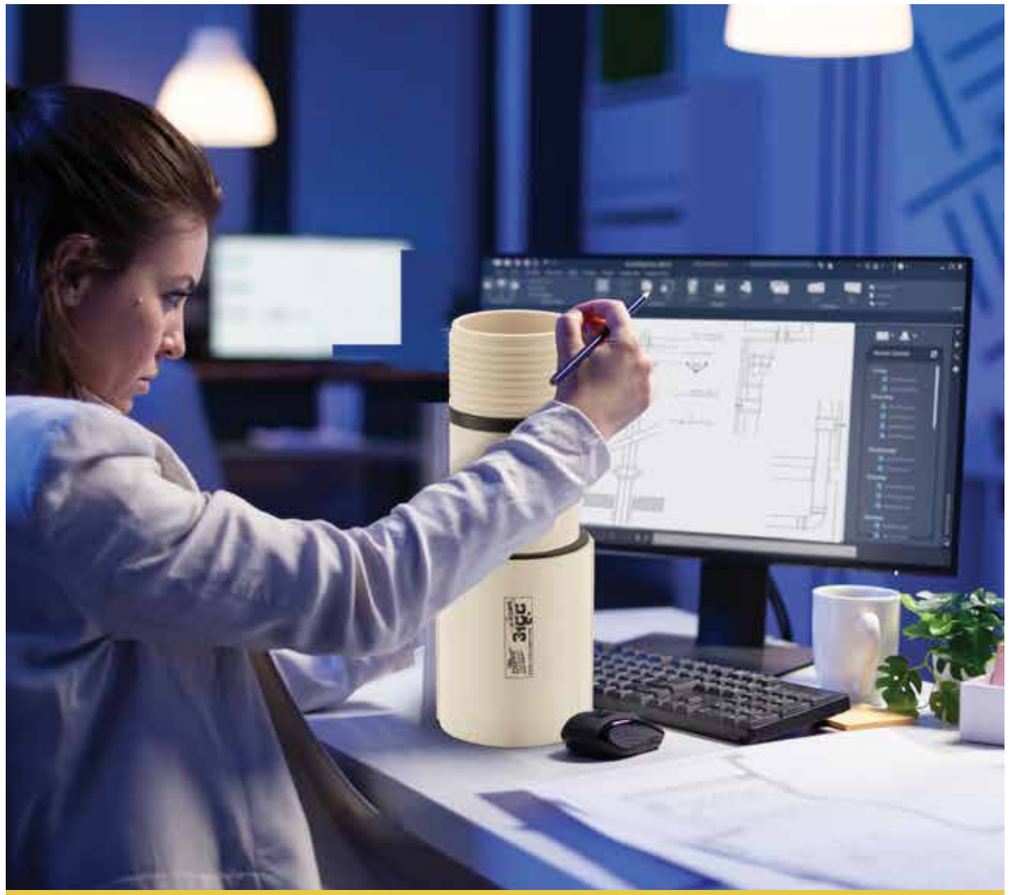
We make quality our utmost priority.
We, therefore, adhere to the most stringent quality checks at every stage of our production process.

RESEARCH & DEVELOPMENT BRINGS OUT THE EXCELLENT

At Duke, learning is a continuous process. With this inmind, we have set up our own ISO certified Research and Development unit, which consists of experts who understand the market and consumer demands, to bring out excellent, effective & efficient pipe designs.

Our R&D department is equipped with the latest design and simulation software with CAD-CAM and MATLAB facilities. Our special Electrical and Hydraulic-testing laboratory develops & tests products for efficiency and durability. A highly skilled team of Mechanical, Plastic and Chemical Engineers work round the clock to manufacture prominent products.

Understand the market and consumer demands,
to bring out excellent, effective & efficient pipe designs.



ENVISIONING A BETTER TOMORROW FOR THE WORLD

While we are already moving ahead with the evolving needs of our customers and environment, we at Duke Pipes Private Limited foresee a world of uncompromising quality that will benefit our customers.

We look forward to a world with no water problems and where our products and services flow in with ease, which is heralded by our adherence to international standards. In the future, we envisage expanding our product range to provide a complete range of water solution that benefits the environment in better ways.

At Duke, we aim to be a major player with an exceptional Corporate Social Responsibility policy to emerge as a responsible organization.

EXCEPTIONAL SERVICES THAT ENABLE BETTER LIVING

We have a specialized team of customer service providers which comprises the most qualified and experienced technocrats; they cater to every technical as well as non-technical assistance for our customer's delight.

CARVING A UNIVERSE OF BLISSFUL CLIENTS

At Duke, our patrons are our biggest priority, and therefore, we leave no stone unturned to provide them with the absolute best! And once we provide them with what they really want, that's when we start building valuable relationships with them. Trust is one thing that can only be gained once they know that they will always get what they want, and nothing less.

Our exhaustive and cautious assessment at every stage, and attention to every minute detail help make our work illustrious.

WE LET OUR ACHIEVEMENTS SPEAK FOR US.

As we continue on our path, we aim to keep creating new milestones through constant efforts and innovation. And along the way, it is always humbling to be appreciated for all the hard work we put in.

Best MSME Awards 2012-13

National Quality Award - 2006

National Quality Award - 2010 by Smt. Pratibha Patil

National Entrepreneurship Award - 2009

EMPOWER Award - 2009

Super SME Award - 2016

National Lean Manufacturing System Award - 2016

MSME Award - 2010

Best MSME Award 2013 - 14

OUR AWARDS & CERTIFICATE

National Quality Award & Entrepreneurship Award Winner Company

IS:4985

IS:12818

ZED

Natioanl Quality Award

ISO:9001:2015

CE

National Award Entrepreneurship

IS:4984

Quality Award

ISO 14001:2015

uPVC Casing Pipe

Specification

- Maximum installation depth 450m for CD Series, 150m for CM series, and 80m for CS series.
- Installation: Vertical, Horizontal or Inclined

Application

- Bore-well Casing, Irrigation, Domestic, Industrial mining, Chemical distribution.
- A wise replacement for MS, ERW, GI, Asbestos and Cement and SS Pipes.
- uPVC is nearly inert towards corrosion, chemical reaction and due to which, it is ideally used in salty, sandy and chemically aggressive water without any effect over the years.

Salient Features

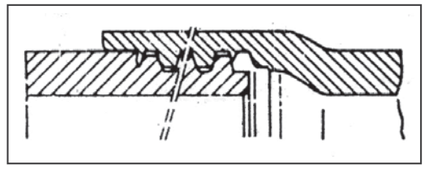
- Easy to Handle
- Corrosion Free
- Ultimate Tensile Strength & Impact Strength
- Maximum Yield of Water
- Easy Joining & Installation
- Fire Proof
- Long Life
- Very high collapsible resistance

Special Features & Identity

- Specification followed IS 12818:2010 equivalent to DIN 4925.
- Trapezoidal threaded socket & spigot ends for easy, reliable jointing, long and better strength.
- Surface finish of this pipe is extremely smooth which reduces the hydraulic friction.
- Ribbed screen pipes are used especially when outer surface area of bore-well casing pipe is to be increased. These ribs provide around 25% of additional surface area by virtue of its design. Besides that if hole gravel balls away from the pipe at a distance of about 2 mm. This arrangement naturally cleans slits due to vertical flow passage and allows more water to seep in, resulting in higher yield than other plain screen pipes from same bore
- Horizontal Slots to get maximum water yield.
- Image in colorize :
  RMS, PMS, CS : Red
  CM : Yellow
  RDS, PDS, CD : Green

Threading

Thread Type: Metric Trapezoidal

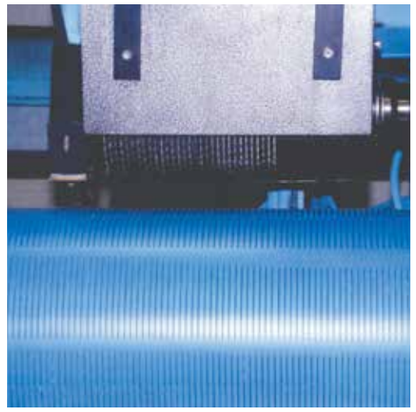


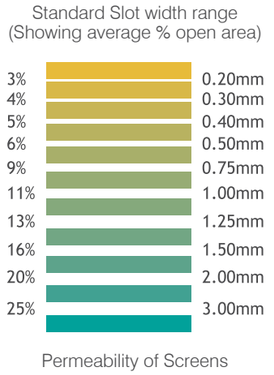
Tensile Strength of the thread joints

ND		Trapezoidal
(mm)	(in)	kN*
100	4	20
115	4.5	20
125	5	30
150	6	40
165	6.5	40
175	7	40
200	8	80
250	10	110
300	12	150

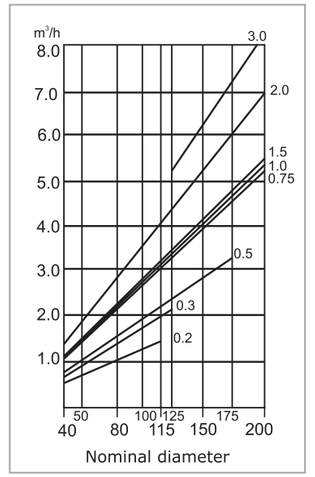
*1kN = 100 Kp

Slotting





The permeability of the screen has to be higher than that of the sand or gravel layer directly next to the outer layer of the screen.



(for slot width of 0.2 mm - 3.0 mm)
Permeability per m of screen
k (m^3/h) at V_T = 3 cm/sec.

uPVC Casing Pipe

CS Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
100*	4.0"	113.0	113.3	4.60	5.20	116.0	48
125*	5.0"	140.0	140.4	5.30	5.60	148.0	63
150	6.0"	165.0	165.4	5.70	6.50	174.0	63
165*	6. 5"	180.0	180.3	6.10	7.10	188.0	63
175	7.0"	200.0	200.5	7.00	7.80	211.0	63
200	8.0"	225.0	225.5	7.60	8.80	238.0	74
225*	9.0"	250.0	250.5	8.80	9.60	262.0	74
250	10.0"	280.0	280.5	9.60	11.0	292.0	90
300	12.0"	330.0	330.6	11.2	13.3	346.0	90
350	14.0"	400.0	400.7	14.0	15.5	420.0	90
400	16.0"	450.0	450.8	16.0	17.5	470.0	102

CM Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
35	1.25"	42.0	42.2	3.5	4.0	46.0	25
40	1.5"	48.0	48.2	3.5	4.0	52.0	25
50	2.0"	60.0	60.2	4.0	4.6	65.0	30
80	3.0"	88.0	88.3	4.0	4.6	94.0	40
100	4.0"	113.0	113.3	5.0	5.7	120.0	48
115	4.5"	125.0	125.3	5.0	5.7	132.0	48
125	5.0"	140.0	140.4	6.5	7.3	150.0	63
150	6.0"	165.0	165.4	7.5	8.5	178.0	63
165*	6.5"	180.0	180.4	8.0	8.5	196.7	63
175	7.0"	200.0	200.5	8.8	9.8	215.0	63
200	8.0"	225.0	225.5	10.0	11.2	243.0	74
225*	9.0"	250.0	250.5	12.0	12.5	270.0	74
250	10.0"	280.0	280.5	12.5	14.0	298.0	90
300	12.0"	330.0	330.6	14.5	16.2	352.0	90
350	14.0"	400.0	400.7	17.5	19.5	428.0	90
400	16.0"	450.0	450.8	19.5	21.7	479.0	102

CD Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
100	4.0"	113.0	113.3	7.00	7.90	125.0	48
115	4.5"	125.0	125.3	7.50	8.50	137.0	48
125	5.0"	140.0	140.4	8.00	9.00	152.0	63
150	6.0"	165.0	165.4	9.50	10.70	180.0	63
165*	6.5"	180.0	180.4	12.00	12.50	200.0	63
175	7.0"	200.0	200.5	11.80	13.60	217.0	63
200	8.0"	225.0	225.5	13.00	14.80	247.0	74
225*	9.0"	250.0	250.5	14.50	15.50	270.0	74
250	10.0"	280.0	280.5	16.00	17.6	304.0	90
300	12.0"	330.0	330.6	19.0	21.0	359.0	90
350	14.0"	400.0	400.7	21.5	23.9	433.0	90
400	16.0"	450.0	450.8	23.5	26.1	490.0	102

* Not Covered in ISI

All Dimensions in mm

R - CS Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
100*	4.0"	117.0	117.3	4.60	5.20	120.0	48
125*	5.0"	144.0	144.4	5.30	5.60	152.0	63
150*	6.0"	169.0	169.4	5.70	6.50	178.0	63
175*	7.0"	204.0	204.5	7.00	7.80	215.0	63
200*	8.0"	229.0	229.5	7.60	8.80	242.0	74
250*	10.0"	284.0	284.5	9.60	11.0	296.0	90
300*	12.0"	334.0	334.6	11.20	13.30	350.0	90

R - CM Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
35	1.25"	46.0	46.2	3.5	4.0	50.0	25
40	1.5"	52.0	52.2	3.5	4.0	56.0	25
50	2.0"	64.0	64.2	4.0	4.6	69.0	30
80	3.0"	92.0	92.3	4.0	4.6	98.0	40
100	4.0"	117.0	117.3	5.0	5.7	124.0	48
125	5.0"	144.0	144.4	6.5	7.3	154.0	63
150	6.0"	169.0	169.4	7.5	8.5	182.0	63
175	7.0"	204.0	204.5	8.8	9.8	219.0	63
200	8.0"	229.0	229.5	10.0	11.2	247.0	74
250	10.0"	284.0	284.5	12.5	14.0	302.0	90
300	12.0"	334.0	334.6	14.5	16.2	356.0	90
350	14.0"	404.0	404.7	17.5	19.5	432.0	90
400	16.0"	454.0	454.8	19.5	21.7	483.0	102

R - CD Casing Pipe

Technical Parameters

Nominal Diameter		Mean Outer Diameter (mm)		Wall Thickness		Mean Outer Dia Over Connection (Max)	Length of Threads
mm	inch	min	max	min	max		
100	4.0"	117.0	117.3	7.0	7.9	129.0	48
115	4.5"	129.0	129.3	7.5	8.5	141.0	48
125	5.0"	144.0	144.4	8.0	9.0	156.0	63
150	6.0"	169.0	169.4	9.5	10.7	184.0	63
175	7.0"	204.0	204.5	11.8	13.6	221.0	63
200	8.0"	229.0	229.5	13.0	14.8	251.0	74
250	10.0"	284.0	284.5	16.0	17.6	309.0	90
300	12.0"	334.0	334.6	19.0	21.0	363.0	90
350	14.0"	404.0	404.7	21.5	23.9	437.0	90
400	16.0"	454.0	454.8	23.5	26.1	494.0	102

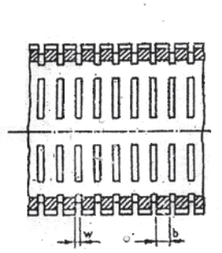
* Not Covered in ISI

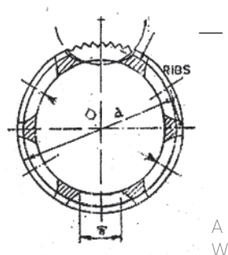
All Dimensions in mm

uPVC Casing Pipe

Slot Arrangements

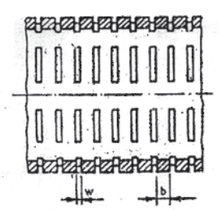
Ribbed Screen Pipe

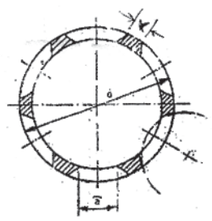




— This portion may or may not have ribs

Plain Screen Pipe



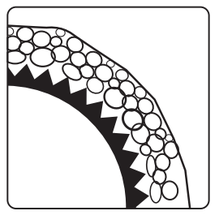


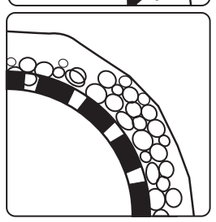
A = Slot length
W = Slot width
b = Longitudinal pitch of slot
V = Vertical pitch
D = Inside diameter
d = Out side diameter

Note: The number of rows of slots in the open area depends on the pipe diameter

Example showing 6 slots around circumference of pipe

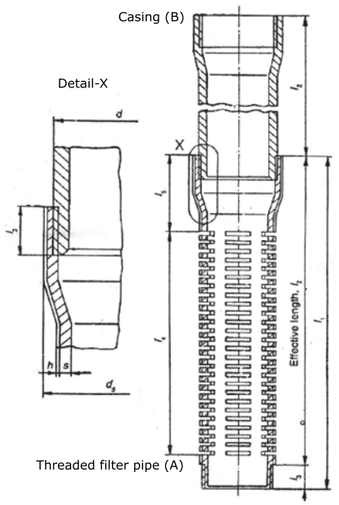
The V-Channel formed by ribs, keeps the gravel pack 2 mm away from slots.



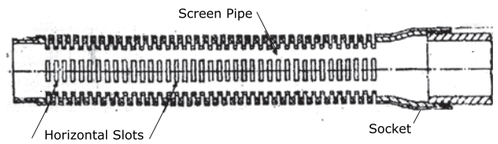


Over half the slots get clogged by the gravel pack.

Screen & Casing Assembly



L1 = Overall Length (L2+L3)
L2 = Effective pipe length, after assembly
L3 = Thread length
D = Outside diameter
DS = Outside socket diameter
S = Wall thickness



Screen Open Area in Percent for width of slot (w)

RMS/PMS											
Nominal Diameter		Number of Slot N (Min)	∑a ± 5%	Slot width in mm							
				0.2	0.3	0.5	0.75	1.0	1.5	2.0	3.0
mm	inch			Free passage area in Percentage							
35	1.25	3	75	3.7	5.2	6	9.1	9.4	9.7	12.1	----
40	1.5	3	85	3.7	5.2	6	9.1	9.4	9.7	12.1	----
50	2	3	108	3.7	5.2	6.0	9.1	9.4	9.7	12.1	----
80	3	3	168	3.7	5.2	6.0	9.1	9.4	9.7	12.1	----
100	4	5	216	3.7	5.2	6.0	9.1	9.4	9.7	12.1	14.0
115	4.5	5	240	3.7	5.2	6.0	9.1	9.4	9.7	12.1	14.0
125	5	5	240	----	4.7	5.6	8.2	8.5	8.8	11.0	13.5
150	6	5	285	----	----	5.6	8.2	8.5	8.8	11.0	13.5
175	7	6	340	----	----	5.6	8.3	8.5	8.8	11.0	13.5
200	8	6	390	----	----	----	8.3	8.5	8.8	11.0	13.5
250	10	6	450	----	----	----	7.6	7.9	8.1	10.2	12.5
300	12	6	530	----	----	----	7.6	7.9	8.1	10.2	12.5
350	14	8	640	----	----	----	----	7.9	8.1	10.2	12.5
400	16	8	720	----	----	----	----	7.9	8.1	10.2	12.5
Slot pitch mm b±0.5 mm				4.0	4.0	5.5	5.5	6.8	9.5	9.5	11.0

Note : ∑a is the Summation of Slot lengths over internal circumferance of the cross-section N is the minimum number of slots on the circumferance of the cross-section

RDS/PDS											
Nominal Diameter		Number of Slot N (Min)	∑a ± 5%	Slot width in mm							
				0.2	0.3	0.5	0.75	1.0	1.5	2.0	3.0
mm	inch			Free passage area in Percentage							
100	4	5	206	----	5.2	6.0	9.1	9.4	9.7	12.1	----
115	4.5	5	230	----	5.2	6.0	9.1	9.4	9.7	12.1	----
125	5	5	235	----	----	5.6	8.2	8.5	8.8	11.0	13.5
150	6	5	278	----	----	5.6	8.2	8.5	8.8	11.0	13.5
175	7	6	330	----	----	----	8.3	8.5	8.8	11.0	13.5
200	8	6	380	----	----	----	7.6	7.9	8.1	10.2	12.5
250	10	6	435	----	----	----	7.6	7.9	8.1	10.2	12.5
300	12	6	512	----	----	----	7.6	7.9	8.1	10.2	12.5
350	14	8	626	----	----	----	----	7.9	8.1	10.2	12.5
400	16	8	706	----	----	----	----	7.9	8.1	10.2	12.5
Slot pitch mm b±0.5 mm				4.0	4.0	5.5	5.5	6.8	9.5	9.5	11.0

Note : ∑a is the Summation of Slot lengths over internal circumferance of the cross-section N is the minimum number of slots on the circumferance of the cross-section

uPVC Casing Pipe

Screen Permeability for width of slot

RMS/PMS								
Nominal Diameter		Slot width in mm						
		0.2	0.3	0.5	0.75	1.0	1.5	2.0	3.0
mm	inch	Free passage area in Percentage							
50	2.0	0.18	0.25	0.29	0.44	0.45	0.46	0.58	0.67
80	3.0	0.27	0.39	0.45	0.68	0.70	0.72	0.90	1.04
100	4.0	0.35	0.50	0.57	0.87	0.90	0.93	1.16	1.34
115	4.5	0.40	0.56	0.64	0.97	1.01	1.04	1.30	1.50
125	5.0	----	0.56	0.66	0.97	1.00	1.04	1.30	1.59
150	6.0	----	----	0.78	1.15	1.19	1.23	1.54	1.89
175	7.0	----	----	0.93	1.38	1.41	1.46	1.82	2.24
200	8.0	----	----	----	1.59	1.62	1.68	2.10	2.58
250	10.0	----	----	----	1.81	1.88	1.93	2.42	2.97
300	12.0	-	-	----	2.13	2.22	2.27	2.86	3.51

Tolerance On Width of slot (w)

Slot width (w) mm	0.2	0.3	0.5	0.75	1.0	1.5	2.0	3.0
"Tolerance (mm)"	+0.06	+0.06	+0.10	+0.20	+0.20	+0.20	+0.20	+0.30
	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00

uPVC Column Pipe

Application

- Water rising for submersible and jet pump for Irrigation, Domestic, Industrial mining, Chemical distribution.
- A wise replacement for MS, PPR, ERW, GI, HDPE and SS Column Pipes.
- uPVC is nearly inert towards corrosion, chemical reaction and erosion due to which, it is ideally used in salty, sandy and chemically aggressive water without any effect over the years.
- Installation : Vertical, Horizontal or Inclined

Salient Features

- Corrosion Free & Inert to Chemicals
- Very low friction losses (10 to 30% more water)
- Cost Effective
- Energy Saver
- Long Life
- Non Toxic
- No Electrolytic Deposition
- Easy Installation & handling

Special Features & Identity

- Surface finish of this pipe is extremely smooth which reduces the hydraulic friction losses and increase flow of water.
- Internal and External Square threaded spigot ends and rubber gasket for easy, reliable joining and pressure sealing.
- Special square thread given quick & easy installation facility and having very high load bearing capacity.
- Inside sealing ring for turbulence free leak proof joint and prevents over tightening.
- Step ring prevents leakages and control the vibration and over tightening.
- Inkjet printing & Hallmark to prevent duplication in market & ensures original genuine products.
- Very smooth internal surface increases 10% to 30% Water & Reduces 10% to 20% Power consumption
- Provision of outer ring to prevent leakage and over tightening.
- Extra-long coupler in Heavy++ & Super Heavy series for higher load pulling strength and maintenance free jointing system over period of time.

uPVC Column Pipe

Technical Specification of Duke uPVC Column/Riser Pipes

Size and Type OD - outside Dia. DN- Nominal Dia.	Wall Thickness (mm)		Outer Dia.(mm)		Total Pipe Length	Coupler OD	Pressure Rating	Details of Packing	Colour coding of Pipes Packing Bag
	Min.	Max.	Min.	Max.	in mm	in mm	Kg	Nos	colour
(1.0") DN:25 mm OD: 33 mm									
1.0" nano x 12.5 kg	3.50	3.70	33.27	33.53	3010	42	12.5	25	
1.0" nano x 12.5 kg (Bell Type)	3.50	3.70	33.27	33.53	3010	-	12.5	25	
1.0" nano x 15 Kg	3.50	3.70	33.27	33.53	3060	45.5	15.0	25	
1.0" nano x 15 kg (Bell Type)	3.50	3.70	33.27	33.53	3010	-	15.0	25	
1.0" medium	3.50	3.75	33.27	33.53	3060	45.5	21.0	25	
1.0" medium (Bell Type)	3.50	3.75	33.27	33.53	3010	-	21.0	25	
1.0" Standard	4.80	5.30	33.27	33.53	3060	45.5	26.0	25	
(1.25") DN:32 mm OD: 42 mm									
1.25" nano x 10 kg	3.90	4.00	42.03	42.29	3010	55.5	10.0	25	
1.25" nano x 12.5 kg	4.20	4.40	42.03	42.29	3010	55.5	12.5	25	
1.25" nano x 12.5 kg (Bell Type)	4.20	4.40	42.03	42.29	3010	-	12.5	25	
1.25" nano x 15 kg	4.20	4.40	42.03	42.29	3060	55.5	15.0	25	
1.25" nano x 15 kg (Bell Type)	4.20	4.40	42.03	42.29	3010	-	15.0	25	
1.25" nano++	4.20	4.40	42.03	42.29	3065	55.5	15.0	25	
1.25" medium	4.20	4.45	42.03	42.29	3060	55.5	21.0	25	
1.25" medium++	4.20	4.45	42.03	42.29	3065	62.5	21.0	25	
1.25" medium (Bell type)	4.20	4.45	42.03	42.29	3010	-	21.0	25	
1.25" standard	5.00	5.50	42.03	42.29	3060	55.5	26.0	25	
1.25" standard++	5.00	5.50	42.03	42.29	3080	55.5	26.0	25	
1.25" Heavy	6.40	6.70	42.03	42.29	3060	55.5	35.0	25	
1.25" Heavy++	6.40	6.70	42.03	42.29	3065	62.5	35.0	25	
1.25" Super heavy++	6.45	6.75	42.03	42.29	3065	62.5	35.0	25	
1.25" Extra Super Heavy	6.70	7.20	42.03	42.29	3065	62.5	40.0	25	
(1.5") DN:40 mm OD: 48 mm									
1.5" Nano	4.30	4.60	48.11	48.41	3060	62.5	15	20	
1.5" Nano (Bell Type)	4.30	4.60	48.11	48.41	3010	-	15	20	
1.5" Medium	4.30	4.80	48.11	48.41	3060	62.5	21	20	
1.5" Medium++	4.30	4.80	48.11	48.41	3065	62.5	21	20	
1.5" Medium (Bell Type)	4.30	4.80	48.11	48.41	3010	-	21	20	
1.5" Standard	5.20	5.45	48.11	48.41	3060	62.5	26	20	
1.5" Standard++	5.20	5.45	48.11	48.41	3065	62.5	26	20	
1.5" Heavy	6.50	6.70	48.11	48.41	3060	62.5	35	20	
1.5" Heavy++	6.50	6.70	48.11	48.41	3065	72.5	35	20	
1.5" Super Heavy	7.00	7.50	48.11	48.41	3100	62.5	35	20	
(2.0") DN:50 mm OD: 60 mm									
2.0" Nano	4.80	5.20	60.17	60.47	3070	72.5	11	15	
2.0" Eco - Medium	4.80	5.20	60.17	60.47	3070	78.5	13	15	
2.0" Medium	4.80	5.40	60.17	60.47	3070	78.5	15	15	
2.0" Standard	6.00	6.50	60.17	60.47	3070	78.5	20	15	
2.0" Standard++	6.40	6.70	60.17	60.47	3070	78.5	23	15	
2.0" Heavy	7.30	8.00	60.17	60.47	3070	84	27	10	
2.0" Super Heavy	8.00	8.30	60.17	60.47	3110	84	35	10	
2.0" Extra Super Heavy	9.50	10.0	60.17	60.47	3110	84	40	10	

Technical Specification of Duke uPVC Column/Riser Pipes

Size and Type OD - outside Dia. DN- Nominal Dia.	Wall Thickness (mm)		Outer Dia.(mm)		Total Pipe Length	Coupler OD	Pressure Rating	Details of Packing	Colour coding of Pipes Packing Bag
	Min.	Max.	Min.	Max.	in mm	in mm	Kg	Nos	colour
(2.25") DN:57 mm OD: 63 mm									
2.25" Medium	5.00	5.20	63.0	63.5	3070	90	15	10	
2.25" Standard	6.30	6.60	63.0	63.5	3070	90	18	10	
2.25" Heavy	7.80	8.30	63.0	63.5	3070	90	26	10	
2.25" Super Heavy	8.50	9.00	63.0	63.5	3100	90	35	10	
2.25" Extra Super Heavy	10.50	11.0	63.0	63.5	3100	90	40	10	
(2.5") DN:65 mm OD: 75 mm									
2.5" Nano	5.00	5.50	74.84	75.2	3070	92.5	11	10	
2.5" Medium	5.30	5.70	74.84	75.2	3075	92.5	13	10	
2.5" Standard	6.60	6.90	74.84	75.2	3075	92.5	18	10	
2.5" Standard++	8.00	8.50	74.84	75.2	3075	92.5	21	10	
2.5" Heavy	8.70	9.40	74.84	75.2	3075	94.5	26	10	
2.5" Heavy++	8.70	9.40	74.84	75.2	3075	100	27	10	
2.5" Super Heavy	9.80	10.30	74.84	75.2	3110	100	35	7	
2.5" Extra Super Heavy	12.50	13.00	74.84	75.2	3110	100	40	7	
(3.0") DN:80 mm OD: 88 mm									
3.0" Medium	6.00	6.70	87.7	88.1	3075	107	11	5	
3.0" Standard	7.40	7.90	87.7	88.1	3075	110	18	5	
3.0" Standard++	8.60	9.00	87.7	88.1	3075	110	21	5	
3.0" Heavy	9.90	10.50	87.7	88.1	3075	114	26	5	
3.0" Heavy++	9.90	10.50	87.7	88.1	3110	120	26	5	
3.0" Super Heavy	10.50	11.00	87.7	88.1	3110	120	35	5	
3.0" Extra Super Heavy	13.40	14.00	87.7	88.1	3110	120	40	5	
(3.5") DN:90 mm OD: 100 mm									
3.5" Heavy	11.40	11.70	99.90	100.2	3110	136	26	3	
3.5" Heavy++	12.80	13.00	99.90	100.2	3110	136	32	3	
3.5" Super Heavy	13.00	13.50	99.90	100.2	3110	136	35	3	
(4.0") DN:100 mm OD: 113 mm									
4.0" Nano	5.80	6.00	113.07	113.53	3080	136	9	5	
4.0" Nano++	6.20	6.40	113.07	113.53	3080	136	9	5	
4.0" Medium	6.50	6.90	113.07	113.53	3080	136	10	5	
4.0" Standard	8.50	9.00	113.07	113.53	3080	136	16	5	
4.0" Standard-Turbo	8.60	9.10	113.07	113.53	3080	136	18	5	
4.0" Standard++	11.00	11.30	113.07	113.53	3080	136	21	5	
4.0" Heavy	12.00	12.80	113.07	113.53	3080	143	26	3	
4.0" Super Heavy	12.50	13.00	113.07	113.53	3115	143	35	3	
4.0" Extra Super Heavy	15.00	15.30	113.07	113.53	3115	143	40	3	
(5.0") DN:125 mm OD: 141 mm									
5.0" Medium	7.70	8.40	141.05	141.55	3120	166	10	3	
5.0" Standard	10.20	10.80	141.05	141.55	3120	166	16	3	
5.0" Heavy	15.00	15.30	141.05	141.55	3120	166	26	3	
5.0" Super Heavy	16.50	17.00	141.05	141.55	3120	166	35	3	
(6.0") DN:150 mm OD: 168 mm									
6.0" Standard	14.10	14.45	167.7	168.5	3115	200	16	1	
6.0" Heavy	16.50	17.30	167.7	168.5	3115	200	26	1	

uPVC Column Pipe

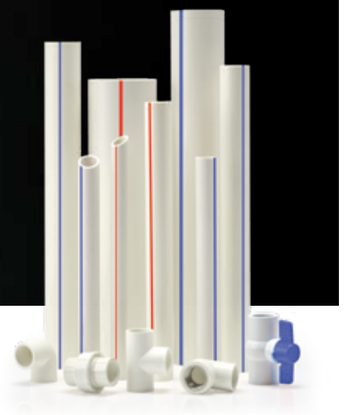
Load & Pressure Technical Data

"Type & Size OD - Outside Dia. NB - Nominal Bore"	"Ultimate Breaking Load (Kgf)"	"Safe Pulling Load with Chain Pulley (Kgf)"	"Safe Allowable Hydrostatic Pressure (Kg/cm^2)"	"Safe Total Pump Delivery (m)"	"Safe Installation Depth (mtr)"	"Safe Installation Depth (Feet)"	"Weight of Pipes on Suitable Depth in Kg (A)"	"Weight of Water on Suitable Depth in Kg (B)"	"Weight of Pump on Suitable Depth in Kg (C)"	"Total Weight on Suitable Depth in Kg (A+B+C)"
OD : 33mm (1") ND : 25 mm										
Nano 12.5	850	500	12.5	125	25	80	9	15	19.7	43.70
Nano 15	1000	580	15	150	30	99	10	19	19.7	48.70
Medium	1500	800	21	210	65	214.5	26	41	23.2	90.20
Standard	2200	1250	26	3CO	150	495	75	85	20.8	180.80
OD : 42mm (1.25") ND : 32 mm										
Nano 12.5	1600	800	12.5	125	25	80	11	23	17.8	51.80
Nano 15	1720	900	15	150	30	99	17	28	17.8	62.80
Medium	1800	1150	21	210	65	214.5	39	61	21.8	121.80
Standard	2650	1400	26	250	150	495	99	135	22.6	256.60
Heavy	3100	1800	35	280	175	574	113	135	100	348.0
Super Heavy	3150	1850	35	400	185	610	-	-	-	-
Extra Superheavy	3500	2070	40	450	198	650	-	-	-	-
OD : 48mm (1.5") ND : 40 mm										
Nano	2000	1000	15	150	30	99	19	33	24.1	76.10
Medium	2300	1200	21	210	65	214.5	41	72	24.5	137.50
Standard	3200	1500	26	260	120	396	97	127	35.9	259.90
Heavy	4200	2000	35	350	160	528	174	162	41.6	377.60
Super Heavy	4350	2150	35	400	185	610	-	-	-	-
OD : 60mm (2") ND : 50 mm										
Eco Medium	2730	1750	13	90	30	99	21	68	51	140.0
Nano	2730	1750	11	90	30	99	21	68	51	140.0
Medium	3040	2000	15	130	65	214.5	54	148	60	262.0
Standard	4950	2500	20	170	100	330	116	216	75	407.0
Standard++	5098	2700	23	200	120	396	154	255	106	515.0
Heavy	5682	3200	27	270	180	594	273	368	126	767.0
Super Heavy	6200	3600	35	350	225	735	380.0	440.0	141	961.0
Extra Superheavy	6200	3800	40	300	185	750	166.0	320.0	150	636.0
OD : 63mm (2 1/4") ND : 57 mm										
Heavy	5750	3385	26	300	178	585	-	-	-	-
Super Heavy	5800	3500	35	330	220	720	-	-	-	-
OD : 75mm (2.5") ND : 65 mm										
Medium	4496	2800	13	100	65	214.5	88	181	80	349.0
Standard	5934	3600	18	160	120	396	188	321	122.5	631.50
Standard++	6683	3800	21	210	150	495	276	384	149	809.50
Heavy	7432	4000	26	260	180	594	364	448	176	988.0
Super Heavy	9194	4250	35	350	200	660	475	475	203	1159.0
Extra Superheavy	10000	4850	40	300	185	750	216	530	200	946.0
OD : 88mm (3") ND : 80 mm										
Medium	5934	4000	11	110	65	214.5	94	325	72	491.0
Standard	9112	5010	18	170	120	396	234	578	294	1106.0
Standard++	9556	5505	21	185	150	495	355	693	351	1398.0
Heavy	10000	6000	26	200	180	594	475	808	408.5	1691.50

Load & Pressure Technical Data

"Type & Size OD - Outside Dia. NB - Nominal Bore"	"Ultimate Breaking Load (Kgf)"	"Safe Pulling Load with Chain Pulley (Kgf)"	"Safe Allowable Hydrostatic Pressure (Kg/cm^2)"	"Safe Total Pump Delivery (m)"	"Safe Installation Depth (mtr)"	"Safe Installation Depth (Feet)"	"Weight of Pipes on Suitable Depth in Kg (A)"	"Weight of Water on Suitable Depth in Kg (B)"	"Weight of Pump on Suitable Depth in Kg (C)"	"Total Weight on Suitable Depth in Kg (A+B+C)"
OD : 88mm (3") ND : 80 mm										
Heavy ++	10500	6200	26	260	190	627	502	853	414	1796.0
Super Heavy	12000	6500	35	350	225	742.5	720	993	418	2131.0
Extra Superheavy	12000	6850	40	300	185	750	303	720	250	1273.0
OD : 100mm (3.5") ND : 90 mm										
Heavy ++	13568	9350	32	260	190	627	668	980	425	2073.0
Super Heavy	13568	9350	35	300	230	750	-	-	-	-
OD : 113mm (4") ND : 100 mm										
Medium	11402	4500	10	1C0	65	214.5	179	428	181	728.0
Standard	12150	7250	16	150	120	396	343	759	326	1428.0
Standard++	14065	9625	21	175	150	495	566	908	383	1855.0
Heavy	15980	12000	26	200	180	594	790	1057	441.5	2288.0
Heavy ++	16636	12500	26	260	190	627	834	1115	452	2401.0
Super Heavy	17536	13100	35	350	225	742.5	1199	1306	455	2960.0
Extra Superheavy	17536	13100	40	350	225	742.5	1199	1306	455	2960.0
OD : 140mm (5") ND : 125 mm										
Medium	12000	7540	10	1C0	65	214.5	272	526	176	974.0
Standard	16000	10440	16	160	120	396	558	933	377	1868.0
Heavy	17058	16240	26	200	180	594	1123	1282	465	2870.0
Heavy ++	18000	170CC	26	260	190	627	1185	1354	465	3004.0
Super Heavy	30000	180CC	35	350	225	742.5	1827	1565	478	3870.0
OD : 168mm (6") ND : 150 mm										
Standard	18050	12550	16	160	120	396.0	1420	2250	800	4470
Heavy	22000	18050	26	260	180	594	1773	2224	1000	4997

uPVC Plumbing Pipe



Application

- Building Construction: These pipes are useful to provide water connections for Bathrooms, Kitchen Sinks, Washbasin & Laboratories.
- Potable Water Supply: It can be used in Complexes, Individual Houses, Flats, Offices, Hotels, Hospitals, Bus Stations, Railway Stations & Airports.
- Industrial Application: Distribution of Water in Industries, Agriculture, Telecommunication, Irrigation & Projects etc.

Salient Features

- Resistant to Corrosion
- Non Toxic
- Weather Resistance
- Easy to Installation
- Fire Proof & Termite Proof
- Good Thermal & Electrical Insulation
- Inert to Chemical

Special Features & Identity

- Internal surface finish of these pipes are smooth which helps to reduce friction losses
- Safe for pure & hygienic water supply
- Special coloured line marking to identify right product.
- Special BSP Threads to prevent leakage with GI fitting.
- Size 15mm (0.5”) to 100mm (4”) (Available in SCH-40, SCH- 80 & SCH-120
- Standards & Specification followed:
  1. ASTM-D-1784-Standard Specification for right PVC compounds
  2. ASTM-D-1785-unplasticized-PVC Pipe-SCH40, SCH-80 & SCH-120
  3. ASTM-D-2467-unplasticized - PVC Pipe fitting SCH-80

Dimension

Nominal Pipe Size		Out Side Diameter	Schedule - 40			Schedule - 80			Schedule - 120		
			Wall Thickness	Working Pressure		Wall Thickness	Working Pressure		Wall Thickness	Working Pressure	
mm	inch	mm	mm	Mpa	psi	mm	Mpa	psi	mm	Mpa	psi
15	½"	21.34 ± 0.10	2.77 ± 0.51	2.07	300	3.73 ± 0.51	2.90	420	4.32 ± 0.51	3.52	510
20	¾"	26.67 ± 0.10	2.87 ± 0.51	1.65	240	3.91 ± 0.51	2.34	340	4.32 ± 0.51	2.69	390
25	1"	33.40 ± 0.13	3.38 ± 0.51	1.55	225	4.55 ± 0.53	2.21	320	5.08 ± 0.61	2.48	360
32	1¼"	42.16 ± 0.13	3.56 ± 0.51	1.27	185	4.85 ± 0.58	1.79	260	5.46 ± 0.66	2.07	300
40	1½"	48.26 ± 0.15	3.68 ± 0.51	1.14	165	5.08 ± 0.61	1.65	240	5.72 ± 0.68	1.86	270
50	2"	60.32 ± 0.15	3.91 ± 0.51	0.96	140	5.54 ± 0.66	1.38	200	6.35 ± 0.76	1.65	240
65	2½"	73.02 ± 0.18	5.16 ± 0.65	1.03	150	7.01 ± 0.84	1.45	210	7.62 ± 0.91	1.59	230
80	3"	88.90 ± 0.20	5.49 ± 0.66	0.89	130	7.62 ± 0.91	1.31	190	8.89 ± 1.07	1.52	220
100	4"	114.3 ± 0.23	6.02 ± 0.71	0.76	110	8.56 ± 1.02	1.10	160	11.1 ± 1.32	1.52	220
Mpa = Mega Pascal | 1MPa = 10 Kg/cm2 | 1Kg/cm2 = 14.20 psi											

Packing Details

(Nos. of Pipes/Bundle)

mm	3 Meter	6 Meter
0.5"	50	25
0.75"	25	25
1"	25	25
1.25"	25	15
1.5"	20	15
2"	10	10
2.5"	10	5
3"	5	3
4"	5	3

uPVC Pressure Pipe

Application

- Water supply for agriculture and irrigation systems.
- Power & Telecommunication cable ducting.
- Rural & Urban water supplies, Gas and Oil Supplies.
- Sewerage and drainage systems.
- Building water supply application.

Special Features & Identity

- Internal surface is very smooth which reduces friction loss.
- Specifications followed : IS 4985:2021
- UV stabilized for use in sunlight.
- Elastomeric sealing ring pipes to prevent leakage.
- Very high pressure resistant capacity.

Salient Features

- Corrosion Free
- Inert to Chemicals
- Easy Installation & Handling
- Very Low Friction Losses
- Non Toxic
- Termite Proof

Technical Parameters

IS 4985:2021 (All Dimensions in mm)

Pipe Size (Inch)	Nominal Outside diameter (nominal Size)	Mean Outside diameter Min - Max	Outside diameter at Any Point Min - Max	Class-1 0.25 Mpa (2.5kg/cm²) Min - Max	Class-2 0.40 Mpa (4kg/cm²) Min - Max	Class-3 0.60 Mpa (6kg/cm²) Min - Max	Class-4 0.80 Mpa (8kg/cm²) Min - Max	Class-5 1.00 Mpa (10kg/cm²) Min - Max	Class-6 1.25 Mpa (12.5kg/cm²) Min - Max
0.5"	20	20.0 - 20.3	19.5-20.5	-	-	-	-	1.1 - 1.5	1.4 - 1.8
0.75"	25	25.0 - 25.3	24.5 - 25.5	-	-	-	1.2 - 1.6	1.4- 1.8	1.7 - 2.1
1.0"	32	32.0 - 32.3	31.5 - 32.5	-	-	-	1.5 - 1.9	1.8 - 2.2	2.2 - 2.7
1.25"	40	40.0 - 40.3	39.5 - 40.5	-	-	1.4 -1.8	1.8 - 2.2	2.2 - 2.7	2.8 - 3.3
1.5"	50	50.0 - 50.3	49.4 - 50.6	-	-	1.7-2.1	2.3 - 2.8	2.8 - 3.3	3.4 - 4.0
2.0"	63	63.0 - 63.3	62.2 - 63.8	-	1.5- 1.9	2.2 - 2.7	2.8 - 3.3	3.5 - 4.1	4.3 - 5.0
2.5"	75	75.0 - 75.3	74.1 - 75.9	-	1.8 - 2.2	2.6-3.1	3.4 - 4.0	4.2 - 4.9	5.1 - 5.9
3.0"	90	90.0 - 90.3	88.9 - 91.1	1.3 -1.7	2.1 - 2.6	3.1 - 3.7	4.0 - 4.6	5.0 - 5.7	6.1 -7.1
4.0"	110	110.0 - 110.4	108.6 - 111.4	1.6 - 2.0	2.5 - 3.0	3.7 - 4.3	4.9 - 5.6	6.1 -7.1	7.5 - 8.7
4.5"	125	125.0 - 125.4	123.5 - 126.5	1.8 - 2.2	2.9 - 3.4	4.3 - 5.0	5.6 - 6.4	6.9 - 8.0	8.5 - 9.8
5.0"	140	140.0 - 140.5	138.3 - 141.7	2.0 - 2.4	3.2 - 3.8	4.8 - 5.5	6.3 - 7.3	7.7 - 8.9	9.5 - 11.0
6.0"	160	160.0 - 160.5	158.0 - 162.0	2.3 - 2.8	3.7 - 4.3	5.4 - 6.2	7.2 - 8.3	8.8 - 10.2	10.9 - 12.6
7.0"	180	180.0 - 180.6	177.8 - 182.2	2.6 - 3.1	4.2 - 4.9	6.1 -7.1	8.0 - 9.2	9.9 - 11.4	12.2 - 14.1
8.0"	200	200.0 - 200.6	197.6 - 202.4	2.9 - 3.4	4.6 - 5.3	6.8 - 7.9	8.9 - 10.3	11.0 - 12.7	13.6 - 15.7
9.0"	225	225.0 - 225.7	222.3 - 227.7	3.3 - 3.9	5.2 - 6.0	7.6 - 8.8	10.0 - 11.5	12.4 - 14.3	15.3 - 17.6
10.0"	250	250.0 - 250.8	247.0 - 253.0	3.6 - 4.2	5.7 - 6.5	8.5 - 9.8	11.2 - 12.9	13.8 - 15.9	17.0 - 19.6
11.0"	280	280.0 - 280.9	276.6 - 283.4	4.1 - 4.8	6.4 - 7.4	9.5 - 11.0	12.5 - 14.4	15.4 - 17.8	19.0 - 21.9
12.0"	315	315.0 - 316.0	311.2 - 318.8	4.6 - 5.3	7.2 - 8.3	10.7 - 12.4	14.0 - 16.1	17.3 - 19.9	21.4 - 24.7
14.0"	355	355.0 - 356.1	350.7 - 359.3	5.1 - 5.9	8.1 - 9.4	12.0 - 13.8	15.8 - 18.2	19.6 - 22.6	24.1 - 27.8
16.0"	400	400.0 - 401.2	395.2 - 404.8	5.8 - 6.7	9.1 - 10.5	13.5 - 15.6	17.8 - 20.5	22.0 - 25.3	27.2 - 31.3

uPVC SWR Pipe/ Underground Drainage Pipe

Application

- Drainage system for home, offices, hotels, residential & commercial complexes and hospitals.
- In industries, chemical plants, power plants drains as chemical waste lines & overflow lines.
- Drainage system for public places such as airports, railway stations, bus stands and theaters.
- In main vent lines in drainage schemes.
- Water recharging systems.

Salient Features

- Strong and Durable
- Easy to handle and join
- Leak proof
- Resistant to rust, UV radiation
- Safe and Economical
- Maintenance free
- Better strength to weight ratio

Special Features & Identity

- IS 13592:2013 and IS 15328:2003
- SWR pipes are strong, sturdy and unbreakable. These are unaffected by weather conditions, termite, bacteria and fungus growths.
- Light in weight, therefore easy to handle and join.
- Smooth internal surface which implies low frictional loss.
- Leak proof due to close dimensional tolerance and precision design.
- Fire resistant and non conductor of electricity.
- No breakage and free from rusting and unaffected by environment stress.
- Require no painting.
- High durability.
- UV stabilizers resists damage from UV sun rays.

Technical Parameters of SWR pipe

IS 13592:2013

Nominal Diameter		Type	Effective Length (mtr)	OD (mm)		Wall Thickness	
mm	inch			min	max	min	max
75	2.5"	A	3	75.0	75.3	1.80	2.20
75	2.5"	B	3	75.0	75.3	3.20	3.80
90	3"	A	3	90.0	90.3	1.90	2.30
90	3"	B	3	90.0	90.3	3.20	3.80
110	4"	A	3	110.0	110.4	2.20	2.70
110	4"	B	3	110.0	110.4	3.20	3.80

Technical Parameters of Underground Drainage Pipe

IS 15328:2003

Nominal Diameter		Effective Length (mtr)	OD (mm)		SN 2 (SDR-51)		SN 4 (SDR-41)		SN 8 (SDR-34)	
					Wall Thickness		Wall Thickness		Wall Thickness	
mm	inch		min	max	min	max	min	max	min	max
110	4.0"	6.0	110.0	110.4	-	-	-	-	3.2	3.7
125	4.5"	6.0	125.0	125.4	-	-	3.2	3.7	3.7	4.4
160	6.0"	6.0	160.0	160.5	3.2	3.7	4.0	4.6	4.7	5.4
200	8.0"	6.0	200.0	200.6	3.9	4.5	4.9	5.6	5.9	6.7
250	10.0"	6.0	250.0	250.8	4.9	5.6	6.2	7.0	7.3	8.3
315	12.0"	6.0	315.0	316.0	6.2	7.0	7.7	8.7	9.2	10.4
400	16.0"	6.0	400.0	401.2	7.9	8.9	9.8	11.0	11.7	13.1

HDPE Pipe

Application

- Drinking Water Supply.
- Lifting of water for agriculture Irrigation or farm house purpose.
- Obtain Water through pumps, bore wells using jets and submersible pumps show better Performance in tube well boring.
- Industrial disposal of chemical effluent & waste.
- Sewerage and drainage systems.
- Transportation of aggressive fluids chemicals and acid.
- Water supply mains and distribution lines.
- Domestic plumbing & floor heating pipe lines.
- Centrally heated hot water pipeline in building, hotels, swimming pools.
- Telecommunication cable ducting.
- Air Conditioning ducting.
- Portable Water supply in urban area as well as rural area.
- Gases like natural gas, liquefied gas and fermentation Gas and oil distribution Supplying lines.
- Cooling water pipe lines like thermal power equipment.
- Used for transportation slurries of iron, Fly Ash etc.

Special Features & Identity

- Light in weight and high tensile strength.
- Resistance to Corrosion, abrasion & UV radiation.
- Smooth internal surface finish which have low friction which save energy.
- Have no effect of weather conditions.
- Strong and long lasting., Up to 50 years durability
- Installed in bore wells without joints.
- Hard and unbreakable
- Low thermal and electrical conductivity.
- Non-toxic
- Perfect weld ability
- Safe for lying under water, under soil, under coastal salt marshes.
- Can be butt welded at site in minutes making joints very strong.
- Safe for portable water as raw material comes with a food grade certificate.

Dimension & Wall Thickness of HDPE Pipe

Pipe Wall Thickness in mm

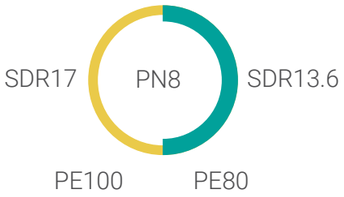
IS 4984:2016

SDR		SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6	
Grade		Nominal Pressure (PN) Bar																			
PE 63		PN 2		PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8		-		-		-	
PE 80		PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20	
PE 100		PN 3		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20		-	
OD		Wall Thickness (mm)																			
mm	inch	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
16	1/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.80	2.10	2.20	2.50	2.70	3.10
20	1/2"	-	-	-	-	-	-	-	-	-	-	-	-	1.90	2.20	2.30	2.60	2.70	3.10	3.40	3.80
25	3/4"	-	-	-	-	-	-	-	-	-	-	1.90	2.20	2.30	2.60	2.80	3.20	3.40	3.80	4.20	4.70
32	1.0"	-	-	-	-	-	-	-	-	1.90	2.20	2.40	2.70	2.90	3.30	3.60	4.10	4.40	4.90	5.40	6.00
40	1.25"	-	-	-	-	-	-	1.90	2.20	2.40	2.70	3.00	3.40	3.70	4.20	4.50	5.10	5.40	6.00	6.70	7.50
50	1.50"	-	-	-	-	2.00	2.30	2.40	2.70	3.00	3.40	3.70	4.20	4.60	5.20	5.60	6.30	6.80	7.60	8.40	9.30
63	2.0"	-	-	-	-	2.50	2.90	3.00	3.40	3.70	4.20	4.70	5.30	5.80	6.50	7.00	7.80	8.60	9.60	10.50	11.70
75	2.5"	1.90	2.20	2.30	2.60	2.90	3.30	3.60	4.10	4.50	5.10	5.60	6.30	6.90	7.70	8.40	9.30	10.20	11.30	12.50	13.90
90	3.0"	2.20	2.50	2.80	3.20	3.50	4.00	4.30	4.80	5.30	5.90	6.70	7.50	8.20	9.10	10.00	11.10	12.20	13.50	15.00	16.60
110	4.0"	2.70	3.10	3.40	3.80	4.30	4.80	5.30	6.00	6.50	7.30	8.10	9.00	10.00	11.10	12.30	13.60	14.90	16.50	18.40	20.30
125	4.5"	3.10	3.50	3.80	4.30	4.80	5.40	6.00	6.70	7.40	8.20	9.20	10.20	11.40	12.70	13.90	15.40	16.90	18.70	20.90	23.10
140	5.0"	3.50	4.00	4.30	4.80	5.40	6.00	6.70	7.50	8.30	9.20	10.30	11.40	12.80	14.20	15.60	17.30	19.00	21.00	23.40	25.80
160	6.0"	3.90	4.40	4.90	5.50	6.20	6.90	7.70	8.60	9.50	10.60	11.80	13.10	14.60	16.20	17.80	19.70	21.70	24.00	26.70	29.50
180	7.0"	4.40	4.90	5.50	6.20	7.00	7.80	8.60	9.60	10.60	11.80	13.30	14.70	16.40	18.10	20.00	22.10	24.40	26.90	30.00	33.10
200	8.0"	4.90	5.50	6.10	6.80	7.70	8.60	9.60	10.70	11.80	13.10	14.70	16.30	18.20	20.10	22.30	24.60	27.10	29.90	33.40	36.80

Material Properties & Compatibility

Materials: Duke manufactures polyethylene Pipes in both PE63, 80 & 100 materials under. The higher strength of PE100 permits thinner pipe walls than PE80 for the same operating pressure. PE100 usesless polymer and provides for a larger bore and increased flow capacity for a given nominal pipe size. This can result in significant cost savings at certain sizes and pressure ratings.

Property	Method of Test	Units	Typical Value		
			PE63	PE80	PE100
Base Density (23°C)	IS 7328	Kg/m³	0.946	0.945	0.945
Melt flow rate (190°C/5.0kg)	IS 2530	g/10min	<1.1	0.45	0.3
Tensile strength at yield	-	MPa	24	27	28
Elongution at break	-	%	>500	>600	>600
Thermal stability (O.I.T.) 200°C	-	Min	>30	>30	>30
MRS (50 years & 20°C)	ISO 9080	MPa	6.3	8.0	10.0



Further details may be obtained from duke Technical Support Department.
These values are typical, actual value depends on exact material, pipe sizes etc.

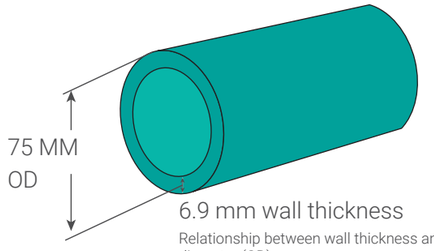
HDPE Pipe

Standard Dimensional Ratio (SDR)

One of the items of information stated on both pipe and fittings is the standard dimensional ratio.
In all but the smallest sizes of PE pipe (<25mm) the ratio between wall thickness and outside diameter remains constant for a given pressure rating of the pipe.This relationship, called the standard dimensional ratio or SDR, can be expressed as an equation:

$$SDR = \frac{\text{nominal (minimum) outside diameter}}{\text{minimum wall thickness}}$$

example: $SDR11 = \frac{75}{6.9}$

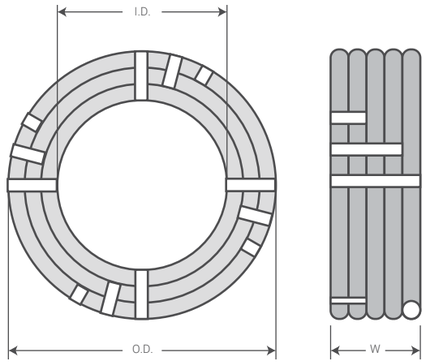


Relationship between wall thickness and outside diameter (OD)

Material	Design Stress (Mpa)	Nominal Pressure (PN)							
		4	5	6	8	10	12.5	16	20
PE 100	8.0	SCR 33	SDR 26	SCR 21	SOR 17	SOR 13.6	SCR 11	SOR 9	SOR 7.4
PE 80	6.4	SOR26	SCR 21	SCR 17	SCR 13.6	SCR 11	SOR 9	SOR 7.4	SOR 6
PE 63	504	SCR 21	SCR 17	SDR 13.6	SCR 11	-	-	-	-

Coil Dimensions

O.D.	SDR	Coil Length	O.D	I.D.	Width	Accomodation for regular truck
mm		meter	Feet			Coils
20	6/7.4/9/11	500	3.2	2.0	1.7	125
25	6/7.4/9/11/13.6		3.9	2.3	2.0	75
32	6/7.4/9/11/13.6/17		4.2	2.7	2.1	22
40	7.4/9/11/13.6/17/21		5.5	3.4	2.1	15
50	7.4/9/11/13.6/17/21/26		6.1	4.2	2.1	12
63	7.4/9/11/13.6/17/21/26	300	7.4	4.1	2.1	8
75	7.4/9/11/13.6/17/21		8.0	4.1	2.1	8
90	7.4/9/11/13.6/17	200	8.6	4.1	2.1	8
90	21/26		10.0	7.0	2.1	8
110	9/11/13.6	100	8.4	4.1	2.1	5
110	17/21		11.0	8.0	2.1	5



Sprinkler Pipe

Application

- Agricultural : Efficient use of water, fertilizers, and electricity in irrigation of a variety of crops like cotton, soybean, wheat, gram, groundnut, pulses, etc. Safety of crops and reduction of soil erosion.
- Industrial : Checking of dust pollution in cement industries and mining pits.
- Other : Playground and golf course maintenance, Land decor and beautification, Fish rearing

Salient Features

- Anti Rust GI Clamps : DUKE sprinkler pipes comes with extra thick Galvanised Iron clamps which has higher rust resistance than powdered coated iron clamps. This increases the life of sprinkler pipes
- Anti Rust screws KP Clamps : As water and metal always mix to make rust which is common in the screws of KP clamps. DUKE Sprinkler pipes comes with rubber bushing between the screws of KP clamps and thus make them rust free.
- Double Lock : DUKE Sprinkler pipes comes with double collared natural rubber rings in the couplers. These rings enables double lock mechanism for the coupler-tail joint and makes it almost impossible to pull the pipes apart during running water flow.
- Leak Proof : Leakage from the joining of Coupler and Pipe is a common problem in sprinkler pipes. DUKE Sprinkler pipes uses friction welding to join coupler-tail and pipes thus making it Leak Proof.
- Light Weight ; DUKE Sprinkler pipes are made from virgin raw material, thus they are light in weight yet provide more pressure resistance than a normal sprinkler pipe.

Characteristics of the Sprinkler Pipe and Fittings

- Service life is long. Unbreakable and is resistant to shocks.
- Sprinkler pipe is easy to use and safe Ideal for seasonal and permanent planting.
- Batter topography with poor irrigation can be done without causing erosion.
- Water; soil, as fine particles is given as the rain; in crop yields. Compared to other irrigation methods provide increased between 20-50% and improves quality.
- Shows high resistance to corrosion.
- Long-range, large area applications, the pressure loss due to smooth inner surface is at a minimum.

Sprinkler Pipe

Technical Parameters

IS 17425:2020

Nominal Diameter		Effective Length (mtr)	OD (mm)		(Class - 1) (0.25 Mpa)		(Class - 2) (0.32 Mpa)		(Class - 3) (0.40 Mpa)		(Class - 4) (0.60 Mpa)	
					Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
mm	inch		min	max	min	max	min	max	min	max	min	max
40	1.5"	6.0	40.0	40.4	-	-	-	-	-	-	2.3	2.8
50	2.0"	6.0	50.0	50.5	-	-	-	-	2.0	2.4	2.9	3.4
63	2.25"	6.0	63.0	63.6	-	-	2.0	2.4	2.5	2.9	3.8	4.4
75	2.50"	6.0	75.0	75.7	2.0	2.4	2.5	2.9	3.0	3.4	4.5	5.2
90	3.0"	6.0	90.0	90.8	2.2	2.6	2.9	3.4	3.5	4.1	5.3	6.1
110	4.0"	6.0	110.0	111.0	2.7	3.2	3.4	3.9	4.2	4.8	6.5	7.4

Our Network