

# VINIDEX uPVC PRESSURE SYSTEM

## PRODUCT CATALOGUE

2007



**Vinidex**  
Systems & Solutions

八達膠管有限公司  
Vinidex (Hong Kong) Co., Ltd.  
A wholly owned subsidiary of Vinidex Pty Limited – Australia



ISO 9001 : 2000  
Certificate No.: CC 417





## Our Company....

Vinidex Pty Limited is Australia's leading manufacturer of thermoplastic pipe systems, with 11 production plants throughout the country and a significant manufacturing presence in the Asia-Pacific region.

Pipe and fitting systems from Vinidex are used in a broad cross-section of markets such as plumbing, electrical, water supply, sewerage, drainage, mining industrial, irrigation, gas, power and telecommunications. The range includes PVC pipe and fittings to 375mm in diameter and Polyethylene pipe and fittings to 1000mm in diameter.

The continuing success of Vinidex is based on decades of on-going innovation in products, services and manufacturing techniques, as well as sustained investment in key technologies.

A combination of the finest raw materials, cutting-edge technologies, quality management and an international growth strategy has led Vinidex to be regarded as one of the most innovative manufacturers and marketers in the field.

Products and processes are benchmarked internationally to keep Vinidex at the forefront of world-class manufactures.

## Quality Assurance

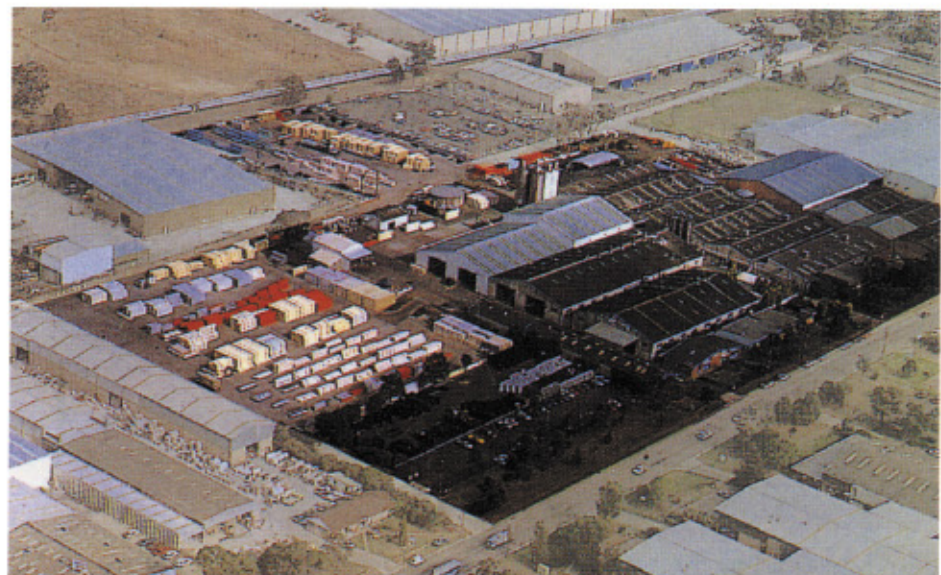
Quality management and enhanced technical skills are major factors in sustaining the rapid and continued acceptance of Vinidex high performance long-life pipe and fittings systems.

Vinidex has been certified under the supplier Assessment Scheme as a Quality Endorsed Company to AS/NZS ISO9001.

The wholly owned operation in Hong Kong, Vinidex( Hong Kong) ,Co., Ltd. was also awarded the ISO9001:2000 certification of Quality System Management issued by the recognized quality agency - Hong Kong Quality Assurance Agency (HKQAA).

Such accreditation is awarded only to companies who have proved their total commitment to product quality, demonstrating that method, procedures and product satisfy the stringent guidelines issued.

From the raw polymer stock entering the factory to the delivery of the end product, our emphasis on total quality ensures performance that exceeds the requirements specified by industry and standards accreditation bodies.





### Introduction

Vinidex pressure pipe and fittings are manufactured from high quality PVC polymer. Vinidex specifications exceed the requirements of various national and state specifying authorities and the Standards Association of Australia.

Vinidex pressure pipe and fittings combine the unique physical properties of PVC polymer with the most advanced manufacturing techniques and will continue to meet the exacting demands of the water supply industry in Australia and a growing number of overseas countries, well into the 21st century.

### Benefits

**Vinidex uPVC pressure pipes and fittings offers major improvements in water quality due to its smooth, non-porous, non-corroding surface:**

- Reduced virus and bacteria growth
- No odour
- No taste
- No rust
- No pH rise

**Vinidex uPVC pressure pipes and fittings provide major cost benefits to users:**

- Lighter and cheaper to transport
- Ease and speed of installation reduces total installed costs
- Lower maintenance costs

### Standards

Vinidex pressure pipes and fittings are designed and tested to meet the requirement of the Australian and British Standards. The applicable standards are :

AS/NZS 1477 : 1999	PVC pipes and fittings for pressure applications
BS 3505 : 1969	Specification for uPVC Pressure pipes for cold potable water
BS 4346 : Part1 : 1969	Injection moulded uPVC fittings for solvent welding for use with pressure pipes, including potable water supply.
BS 6920 : 1984	Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of water.
ISO 4422	Pipes and fittings made of PVC-u for water supply.

Most fittings in the Vinidex solvent cement pressure fittings range are manufactured to AS/NZS 1477 and are for use with rigid PVC pressure pipe manufactured to this standard. Some sizes of fittings in our range however, are imported and are made to other international standards. Please contact your local sales representative for further information.

### Threads

All watertight threads used in Vinidex uPVC pressure system are complied with BS 21:1973.

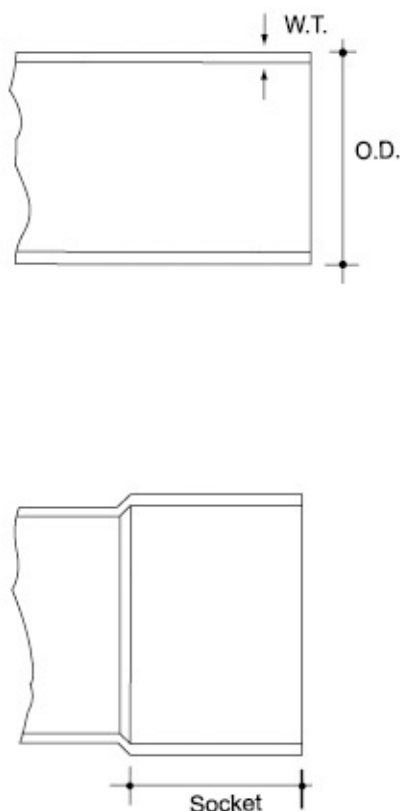
### Installation

It is essential that the Vinidex uPVC pressure system is installed in accordance with the manufacturer's instructions, which are given in this product catalogue.

### Dimensions

All dimensions are in millimetres unless otherwise stated.

## Pipe Dimensions



A wide range of standard uPVC pressure pipes are manufactured by Vinidex to suit the variety of applications. Full details of dimensions of all sizes, PN rating and pipe lengths are given in the following tables.

BS 3505 Class E, AS/NZS 1477

CODE	Size(DN)		PN bar	Mean O.D.	Mean W.T.	Pipe Length	Socket Length
	m	inch					
VPP18155.5	15	½"	15	21.35	2.30	5.5m	-
VPP18205.5	20	¾"	15	26.75	2.70	5.5m	-
VPP18255.5	25	1"	15	33.55	3.00	5.5m	-
VPP18325.5	32	1¼"	15	42.25	3.05	5.5m	-
VPP18405.5	40	1½"	15	48.25	3.40	5.5m	-
VPP18505.5	50	2"	15	60.35	4.20	5.5m	-
VPP18655.5	65	2½"	15	75.35	5.20	5.5m	-
VPP18805.5	80	3"	15	88.90	6.1	5.5m	-
VPP181005.5	100	4"	15	114.30	7.7	5.5m	-
VPP121505.5	150	6"	12	160.25	8.80	5.5m	-
VPP181505.5	150	6"	18	160.25	12.80	5.5m	127
VPP092006.0	200	8"	9	225.30	8.40	6.0m	152
VPP122006.0	200	8"	12	225.30	11.10	6.0m	152
VPP092256.0	225	9"	9	250.00	9.35	6.0m	178
VPP122256.0	225	9"	12	250.00	12.30	6.0m	178
VPP092506.0	250	10"	9	284.40	10.50	6.0m	203
VPP122506.0	250	10"	12	284.40	13.75	6.0m	203

### Pipe Ends

Size DN15 to DN 150 are plain end ;

Sizes DN150 and larger are with one end socketed (belled) for solvent cement joints.

### Diameters

Diameters of PVC pipes are referenced by their 'Nominal Size' or simply 'Size (symbol DN, in accordance with international practice.).

### Joints

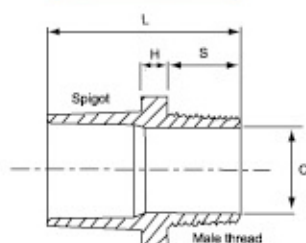
Vinidex pressure pipes employ two jointing systems:

- Solvent Cement Joint**  
A chemically 'welded' joint with capability of supporting axial thrust. Available in sizes to DN300 but especially suited to smaller diameter above ground systems.
- Rubber Ring Joint: POLYDEX®**  
A rubber ring joint system providing a flexible joint with capability of axial and angular movement. Simple, error-free installation makes this joint suited to larger diameter underground work. Sizes DN50 and larger.  
Consult your Vinidex office for details.



## PRODUCT DATA

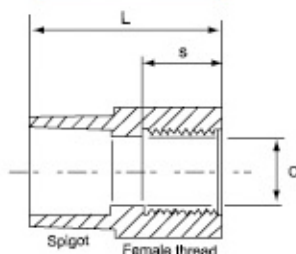
### Cat 02 Valve Take Off Adaptors



The spigot end of this fittings is solvent cement jointed to the socket of another fittings. The tapered male threaded end provides a connection for PVC, brass or galvanised wrought iron threaded valve-Type fittings.

CODE	SIZE	PN	C	S	H	L	Ctn Qty
VPF0215	15 × 15	18	14.6	18.0	7.0	43.0	600
VPF0220	20 × 20	18	19.2	19.6	7.0	46.6	360
VPF0225	25 × 25	18	24.4	22.2	7.8	53.0	250
VPF0232	32 × 32	18	31.7	24.5	8.0	60.0	140
VPF0240	40 × 40	18	36.9	24.4	9.0	64.0	120
VPF0250	50 × 50	18	46.6	29.0	8.6	74.2	130
VPF0280	80 × 80	18	70.0	33.5	19.5	164.0	12
VPF02100	100 × 100	18	90.0	40.0	20.0	184.0	7

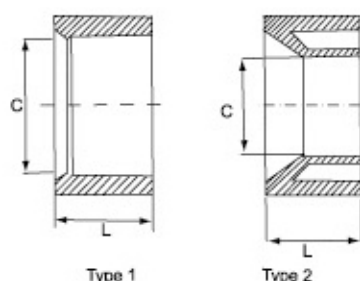
### Cat 03 Faucet Take Off Adaptors



The spigot end of this fittings is solvent cement jointed to the socket of another fittings. The female threaded end provides a connection for male BSP threads such as spray nozzles.

CODE	SIZE	PN	C	S	L	Ctn Qty
VPF 0315	15 × 15	18	16.5	16.0	41.7	260
VPF0320	20 × 20	18	21.7	18.5	45.0	300
VPF 0325	25 × 25	18	27.8	21.4	51.4	200
VPF0332	32 × 32	18	35.0	25.0	57.7	120
VPF0340	40 × 40	18	39.4	28.0	64.1	100
VPF0350	50 × 50	18	49.5	27.5	68.5	120
VPF0380	80 × 80	18	79.3	35.0	163.0	12

### Cat 05 Reducing Bushes



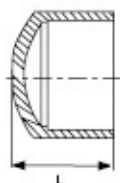
This fitting is used for solvent cement jointing into the socket of a fitting to give a reduction in bore.

CODE	SIZE	PN	C	S	TYPE	Ctn Qty
VPF052015	20 × 15	18	17.0	21.6	1	1200
VPF052515	25 × 15	18	16.0	24.5	1	600
VPF052520	25 × 20	18	22.0	24.8	1	600
VPF053225	32 × 25	18	27.0	27.7	1	100
VPF054032	40 × 32	18	34.6	31.5	1	100
VPF055025	50 × 25	18	27.0	36.9	2	70
VPF055040	50 × 40	18	41.5	37.0	1	140
VPF058050	80 × 50	18	56.7	51.0	2	50
VPF0510050	100 × 50	18	56.5	61.0	2	28
VPF0510080	100 × 80	18	85.6	61.5	1	28
VPF05150100	150 × 100	18	106.7	90.0	1	8



## PRODUCT DATA

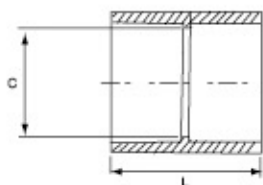
### Cat 06 Caps



Caps are solvent-cemented to the end of a pipe or fitting spigot to provide line termination. They can also be used to temporarily prevent the entry of dirt and foreign matter into a pipeline.

CODE	SIZE	PN	L	Ctn Qty
VPF0615	15	18	25.8	1000
VPF0620	20	18	29.7	600
VPF0625	25	18	34.3	300
VPF0632	32	18	50.0	120
VPF0640	40	18	46.6	160
VPF0650	50	18	56.0	80
VPF0665	65	12	73.0	48
VPF0680	80	18	76.5	60
VPF06100	100	18	94.5	15
VPF06150	150	12	137.0	6

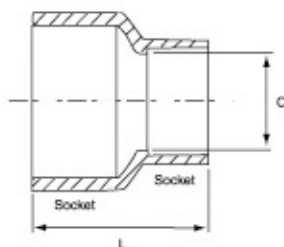
### Cat 07 Couplings



Couplings are used for the solvent cement jointing of two lengths of PVC pipe.

CODE	SIZE	PN	C	L	Ctn Qty
VPF0715	15	18	18.3	39.0	600
VPF0720	20	18	24.0	43.6	320
VPF0725	25	18	30.5	49.0	180
VPF0732	32	18	39.0	57.5	168
VPF0740	40	18	45.5	65.0	126
VPF0750	50	18	57.0	77.3	100
VPF0765	65	12	66.0	110.5	60
VPF0780	80	18	85.7	104.5	39
VPF07100	100	18	110.5	125.5	21
VPF 07150	150	18	149.5	190.4	4

### Cat 08 Reducing Couplings

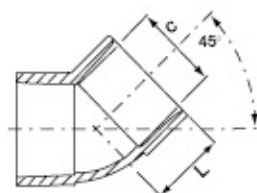


Reducing couplings are used for the solvent cement jointing of two different sizes of PVC pipe.

CODE	SIZE	PN	C	L	Ctn Qty
VPF082015	20 × 15	18	16.4	45.7	680
VPF082515	25 × 15	18	18.5	52.5	260
VPF082520	25 × 20	18	21.0	51.5	280
VPF083220	32 × 20	18	23.1	63.4	160
VPF083225	32 × 25	18	31.5	66.4	220
VPF084015	40 × 15	18	16.0	58.5	120
VPF084020	40 × 20	18	23.0	63.5	140
VPF084025	40 × 25	18	27.0	60.5	120
VPF084032	40 × 32	18	37.1	71.5	80
VPF085020	50 × 20	18	21.5	67.0	100
VPF085025	50 × 25	18	27.0	73.0	100
VPF085032	50 × 32	18	37.0	82.9	100
VPF085040	50 × 40	18	41.5	74.6	80
VPF086550	65 × 50	12	51.0	105.0	40
VPF088050	80 × 50	18	57.5	100.0	30
VPF088065	80 × 65	12	67.5	120.0	24
VPF0810050	100 × 50	18	58.0	115.6	28
VPF0810080	100 × 80	18	87.0	124.0	28
VPF08150100	150 × 100	18	107.5	184.0	4

## PRODUCT DATA

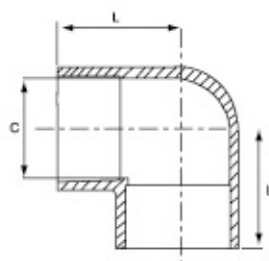
### Cat 10 45° Elbows



Elbows are used to provide 45° changes in direction in pipelines. They are often employed in confined space situations in place of cat 12, 45° bends.

CODE	SIZE	PN	C	L	Ctn Qty
VPF1015	15	18	17.8	33.0	480
VPF1020	20	18	25.0	27.0	200
VPF1025	25	18	32.0	29.0	120
VPF1032	32	18	38.9	45.5	80
VPF1040	40	18	46.5	40.5	140
VPF1050	50	18	58.5	50.0	60
VPF1065	65	12	68.5	68.5	40
VPF1080	80	18	78.2	82.5	24
VPF 10100	100	18	102.5	96.0	12
VPF 10150	150	12	156.5	124.0	4

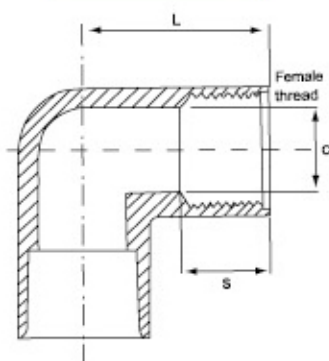
### Cat 13 90° Elbows



These are moulded fittings, which are used to provide 90° bends in pipelines. They are often employed in confined space situations in preference to Cat 12, 90° bends.

CODE	SIZE	PN	C	L	Ctn Qty
VPF135	15	18	15.5	43.3	400
VPF1320	20	18	25.0	33.0	240
VPF132520	25 × 20	18	20.5	46.3	120
VPF1325	25	18	32.0	39.5	120
VPF1332	32	18	40.0	52.0	80
VPF1340	40	18	46.5	54.0	48
VPF1350	50	18	58.5	67.0	60
VPF1365	65	12	67.5	92.0	30
VPF 1380	80	18	86.5	95.0	22
VPF 13100	100	18	102.2	136.0	8
VPF 13150	150	12	143.0	181.0	3

### Cat 15 90° Faucet Elbows

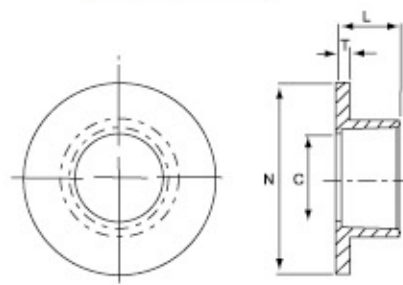


The faucet elbow is used to provide a female BSP connection. In irrigation it is used as a means of connecting a threaded riser pipe to an underground pipeline.

CODE	SIZE	PN	C	L	S	Ctn Qty
VPF1515	15 × 15	18	15.2	43.5	25.0	300
VPF152015	20 × 15	18	15.0	28.0	16.5	300
VPF1520	20 × 20	18	20.5	30.0	18.0	300
VPF152515	25 × 15	18	15.0	46.4	24.5	140
VPF152520	25 × 20	18	20.5	46.4	23.2	140
VPF1525	25 × 25	18	26.8	46.4	23.9	120

## PRODUCT DATA

### Cat 16 Flanges

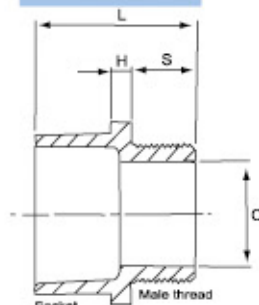


Flanges are used to bolt PVC pipes to pumps and valves etc. Flanged disconnectable fittings provide capability for maintenance and future changes to the pipeline.

Vinidex recommends the use of a metal backing ring with all flanges of 50mm nominal size and over.

CODE	SIZE	PN	C	L	N	T	Ctn Qty
VPF1615	15	18	18.0	27.9	95.8	13.5	100
VPF1620	20	18	22.0	30.0	102.2	13.5	90
VPF1625	25	18	29.0	33.0	115.0	13.5	60
VPF1632	32	18	35.4	33.0	121.2	13.5	60
VPF1640	40	18	41.5	42.0	132.0	13.5	40

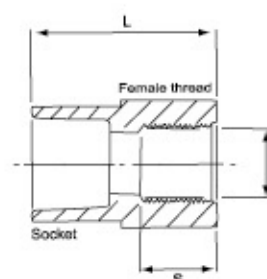
### Cat 17 Valve Sockets



The valve socket is solvent cement jointed to a pipe spigot. The male-threaded end of the valve socket provides a connection for a PVC, brass or galvanised wrought iron threaded-type fitting.

CODE	SIZE	PN	C	H	L	S	Ctn Qty
VPF1715	15	18	14.5	6.6	43.0	18.0	600
VPF1720	20	18	19.0	6.8	46.7	19.6	360
VPF1725	25	18	24.2	8.0	53.0	22.1	320
VPF1732	32	18	31.5	8.0	60.5	24.7	220
VPF1740	40	18	37.0	8.9	64.0	24.5	160
VPF1750	50	18	46.3	8.6	74.5	29.0	60
VPF 1765	65	12	62.5	9.5	92.0	28.5	40
VPF 1780	80	18	70.0	19.7	94.5	34.5	25
VPF 17100	100	18	90.0	20.0	112.5	41.0	13

### Cat 18 Faucet Sockets



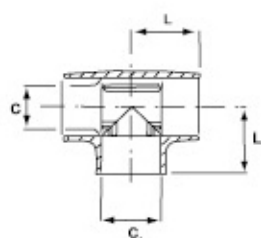
The faucet socket is solvent cement jointed to a pipe spigot. The female-threaded end of the faucet socket provides a connection for a faucet tap fitting or a spray nozzle.

CODE	SIZE	PN	C	L	S	Ctn Qty
VPF1815	15	18	17.5	47.0	14.5	400
VPF1820	20	18	22.0	50.2	18.5	250
VPF1825	25	18	28.2	56.2	21.5	180
VPF1832	32	18	34.3	62.6	25.0	120
VPF1840	40	18	39.2	69.0	27.0	80
VPF1850	50	18	49.3	72.3	26.5	100
VPF1880	80	18	83.5	95.0	35.0	22
VPF18100	100	18	107.5	112.0	40.0	9



## PRODUCT DATA

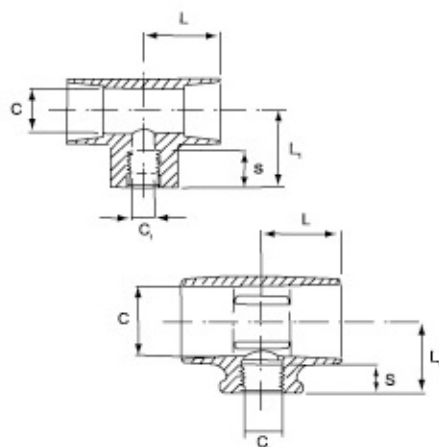
### Cat 19 Tees



Tees provide a branch at 90° from a main line. Available in equal or reducing branches.

CODE	SIZE	PN	C	C1	L	L1	Ctn Qty
VPF1915	15	18	15.5	15.5	43.2	43.0	320
VPF192015	20 × 15	18	20.4	15.5	42.9	42.7	160
VPF1920	20	18	25.0	24.0	37.5	32.5	160
VPF192515	25 × 15	18	27.0	15.6	46.2	46.0	100
VPF192520	25 × 20	18	27.0	20.7	46.2	46.2	100
VPF1925	25	18	32.0	31.0	36.0	36.0	80
VPF193220	32 × 20	18	37.0	20.0	48.0	45.8	70
VPF193225	32 × 25	18	37.0	25.0	48.0	45.8	70
VPF1932	32	18	41.5	41.5	52.0	52.0	100
VPF194015	40 × 15	18	38.6	17.0	58.9	49.5	80
VPF194020	40 × 20	18	42.0	20.0	50.9	49.0	80
VPF194025	40 × 25	18	42.0	25.0	50.9	49.0	80
VPF194032	40 × 32	18	38.6	33.5	58.9	59.0	80
VPF1940	40	18	46.0	45.5	54.5	55.0	60
VPF195020	50 × 20	18	48.3	27.0	69.6	54.0	50
VPF195025	50 × 25	18	48.3	33.8	69.6	56.0	50
VPF195040	50 × 40	18	48.0	39.3	74.2	72.5	30
VPF1950	50	18	59.0	57.5	66.5	66.5	40
VPF196550	65 × 50	12	68.5	54.0	89.0	78.0	25
VPF 1965	65	12	67.0	67.0	92.0	92.0	26
VPF 198025	80 × 25	18	86.0	30.0	67.0	67.0	10
VPF 198032	80 × 32	18	85.0	33.5	80.5	71.0	10
VPF 198040	80 × 40	18	85.0	43.0	80.5	74.5	10
VPF 198050	80 × 50	18	85.0	55.0	80.5	81.0	9
VPF 1980	80	18	86.0	84.0	94.5	94.0	13
VPF 1910025	100 × 25	12	107.0	27.0	94.5	93.5	12
VPF 1910050	100 × 50	12	107.0	56.5	94.5	94.0	12
VPF 1910080	100 × 80	12	106.5	83.0	111.0	126.0	9
VPF 19100	100	18	110.0	107.3	116.5	117.0	5
VPF 19150100	150 × 100	12	143.0	102.0	150.5	131.0	3
VPF 19150	150	12	143.0	143.0	173.0	173.0	2

### Cat 21 Faucet Tees

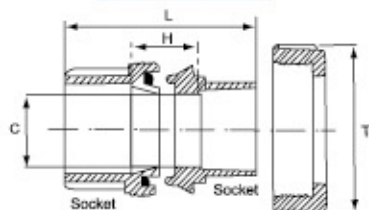


Faucet tees are used mainly in irrigation pipelines. The female thread in the tee branch provides a connection for a threaded riser pipe.

CODE	SIZE	PN	C	C1	L	L1	S	Ctn Qty
VPF2115	15 × 15	18	15.5	15.5	43.2	43.0	24.5	210
VPF212015	20 × 15	18	24.0	15.5	27.2	30.5	17.1	120
VPF2120	20 × 20	18	20.5	20.5	43.0	42.4	23.0	60
VPF212515	25 × 15	18	20.5	15.5	43.0	42.4	17.3	180
VPF212520	25 × 20	18	26.8	21.0	46.2	46.2	23.0	100
VPF2125	25 × 25	18	27.0	27.0	46.2	45.5	24.0	80
VPF213220	32 × 20	18	37.0	20.0	48.0	45.0	19.7	60
VPF213225	32 × 25	18	37.0	26.0	48.0	45.0	22.8	60
VPF214020	40 × 20	18	42.0	20.0	51.0	49.0	19.7	80
VPF214025	40 × 25	18	42.0	26.0	50.9	49.0	22.8	80
VPF 215020	50 × 20	18	52.0	20.0	57.0	55.1	19.7	60
VPF 215025	50 × 25	18	52.0	26.0	57.0	55.1	22.8	60

## PRODUCT DATA

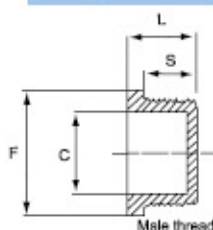
### Cat 22 Unions



Unions are used to join together two sections of PVC pipe. In industrial applications they are used as an alternative to a flange in situations where future inspection of lines is anticipated. Easily assembled and disassembled, they can be used in pipeline repair situations.

CODE	SIZE	PN	C	H	L	T	Ctn Qty
VPF2220	20	18	21.6	17.0	68.0	63.0	100
VPF2225	25	18	27.0	16.7	73.2	70.0	80
VPF2232	32	18	33.8	18.0	81.0	83.0	40
VPF2240	40	18	41.0	20.0	80.0	88.0	60
VPF2250	50	18	49.0	22.5	98.0	111.0	40

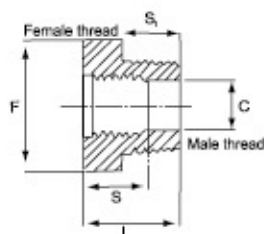
### Cat 23 Threaded Plugs



Threaded plugs are used as blank-offs for female threaded fittings.

CODE	SIZE	PN	C	F	L	S	Ctn Qty
VPF2315	15	18	14.6	27.0	25.0	18.0	1200
VPF2320	20	18	17.5	32.0	26.0	19.1	360
VPF2325	25	18	24.1	39.6	30.0	22.2	200
VPF2332	32	18	31.8	50.0	32.4	24.4	120
VPF2340	40	18	37.0	55.5	33.5	24.5	100
VPF2350	50	18	47.0	70.0	37.7	28.5	60
VPF2380	80	18	70.0	105.0	53.0	33.5	54

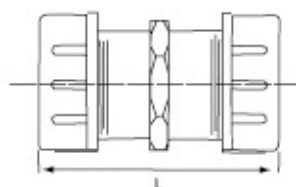
### Cat 24 Threaded Bushes



Threaded reducing bushes are used mostly in irrigation applications to reduce the size of faucet elbows, faucet tees and faucet sockets so that they can receive smaller sized faucet fittings.

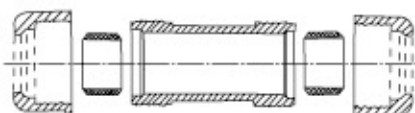
CODE	SIZE	PN	C	F	L	S	Ctn Qty
VPF242520	25 x 20	18	20.2	39.2	30.1	23.0	23.0 200

### Cat P03 Compression Couplings



This fitting is a 'wet' or quick repair joint for small bore pressure lines. It is also used as expansion joints of pipelines. The advantage of this fitting is that pressure can be restored to the system immediately after installation. The compression coupling is slipped along the pipe to the desired position and the nuts are then tightened. Lubricant should be used on the pipe.

CODE	SIZE	PN	L	Ctn Qty
P03015	15	12	121.0	28
P03020	20	12	126.0	24
P03025	25	12	133.0	15
P03080	80	12	270.0	5
P030100	100	12	312.0	5





### Introduction

Two points critical to the solvent cement jointing procedure are:

- The solvent cement and priming fluid used should be produce in accordance with AS3879(1991)-Solvent cements and priming fluid for use with uPVC pipes and fittings, or BS4346:Part3:1969, or approved by the manufacturer.
- Solvent cement jointing is a trade skill and should be executed only by appropriately qualified persons.

The following procedure should be strictly observed for best results. The steps and precautions will allow easy and efficient assembly of joints.

**Incorrect procedure and short cuts will lead to poor quality joints and possible system failure.**

### Precautions to achieve an effective joint

To achieve strong sealed, leak free and safe jointing significant long and short term installation savings, these additional precautions should be followed:

#### Cutting and Jointing

- a) Make sure that the end of each pipe is square in its socket and in the same alignment and grade as the preceding pipes or fittings. Cut the pipe using a fine toothed saw and mitre box or circular saw with an abrasive disc. To ensure full interference fit, the last few millimetres of spigot count.
- b) Create a 0.5mm chamfer, as a sharp edge on the spigot will wipe off the solvent and reduce the interface area. Remove all swarf and burrs so that later filings cannot become dislodged and jam taps and valves.
- c) Do not attempt to joint pipes at an angle. Curved lines should be jointed without stress, then curved after the joint is cured. Support the spigot and socket clear of the ground when jointing, this will avoid contamination with sand or soil.
- d) An unsatisfactory solvent cement joint cannot be re-executed, nor can previously cemented spigots and socket be re-used. To effect repairs, cut out the joint and remake or use mechanical repair fittings.

#### Apply Correct Solvent Quantity

The correct amount of solvent is a uniform self levelling layer without runs, achieved by experience and judgment. Too much solvent will form pools and continue to attack and weaken the pipe. Too little solvent will require you to brush out excessively, the solvent will quickly evaporate with vigorous brushing.

Take care not to spill solvent cement onto pipes or fittings. Accidental spillage should be wiped off immediately.

#### Adverse Weather

High temperature and air movement will radically increase the loss of solvent, and solvent cement jointing should not be performed when the temperature is more than 35°C. Some form of protection should be provided when jointing in windy and dusty conditions.

When jointing under wet and very cold conditions, make sure that the mating surfaces are dry and free from ice, as moisture may prevent the solvent cement from obtaining its maximum strength.

#### Storage

Keep the containers stored below 30°C. The solvent cement lids should be tightly sealed when not in use to prevent evaporation of the solvent. Do not use solvent cement that has gone cloudy or has started to gel in the can.

#### Health

If solvent cement or priming fluid is swallowed, do not induce vomiting, dilute by giving two glasses of water, and seek medical advice immediately.

#### Average Number of Joints per 500ml

The following table provides an indication as to the number of joints that are made per 500ml container of Priming Fluid and Solvent Cement.

Pipe Size (DN)	Priming Fluid	Solvent Cement
15	1050	300
20	625	175
25	450	130
32	325	95
40	250	70
50	150	42
65	125	35
80	100	30
100	70	25
125	60	20
150	45	15
200	25	10
225	15	7
250	12	6
300	12	5
375	12	5

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## Procedure

### 1. Prepare the Pipe

Before jointing, check that the pipe has been cut square and all the burrs are removed from the inside and outside edge. Remove the sharp edge from the outside and inside of the pipe with a deburring tool. Do not create a large chamfer that will trap a pool of solvent cement. Remove all dirt, swarf, and moisture from spigot and socket.

### 2. Witness Mark the Pipe

It is essential to be able to determine when the spigot is fully home in the socket. Mark the spigot with a pencil line ('witness mark') at a distance equal to the internal depth of the socket. Other marking methods may be used provided that they do not damage or score the pipe.

### 3. 'Dry Fit' the Joint

'Dry fit' the spigot into the socket, check the pipe for proper alignment. Any adjustments for the correct fit can be made now, not later. For pressure pipes, the spigot should interfere in the socket before it is fully inserted to the pencil line. Ovality in the pipe and socket will automatically be re-rounded in the final solvent cementing process, but heavy walled pipe may give a false indication of the point of interference. Do not attempt to make a pressure pipe joint that does not have an interference fit. Contact Vinidex if this occurs.

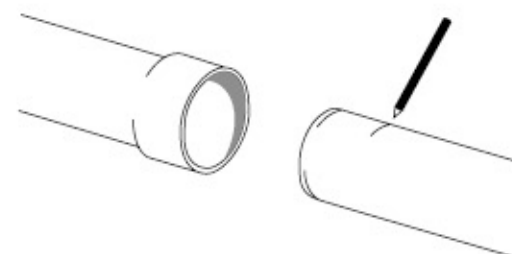
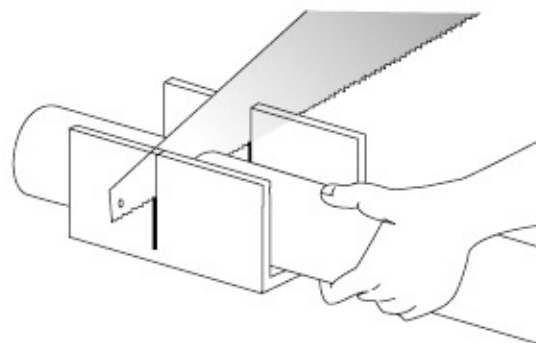
### 4. Prepare with Priming Fluid

Dry, degrease and prime the spigot and socket with a lint free cloth (natural fibres) dampened with Vinidex priming fluid. Priming is vitally important, as it etches off the gloss from the PVC, it softens the PVC surface for the solvent cement's effective bond. Use protective polyethylene gloves. Priming fluids are to be used before solvent cementing, prime and solvent cement one joint at a time.

### 5. Brush Selection

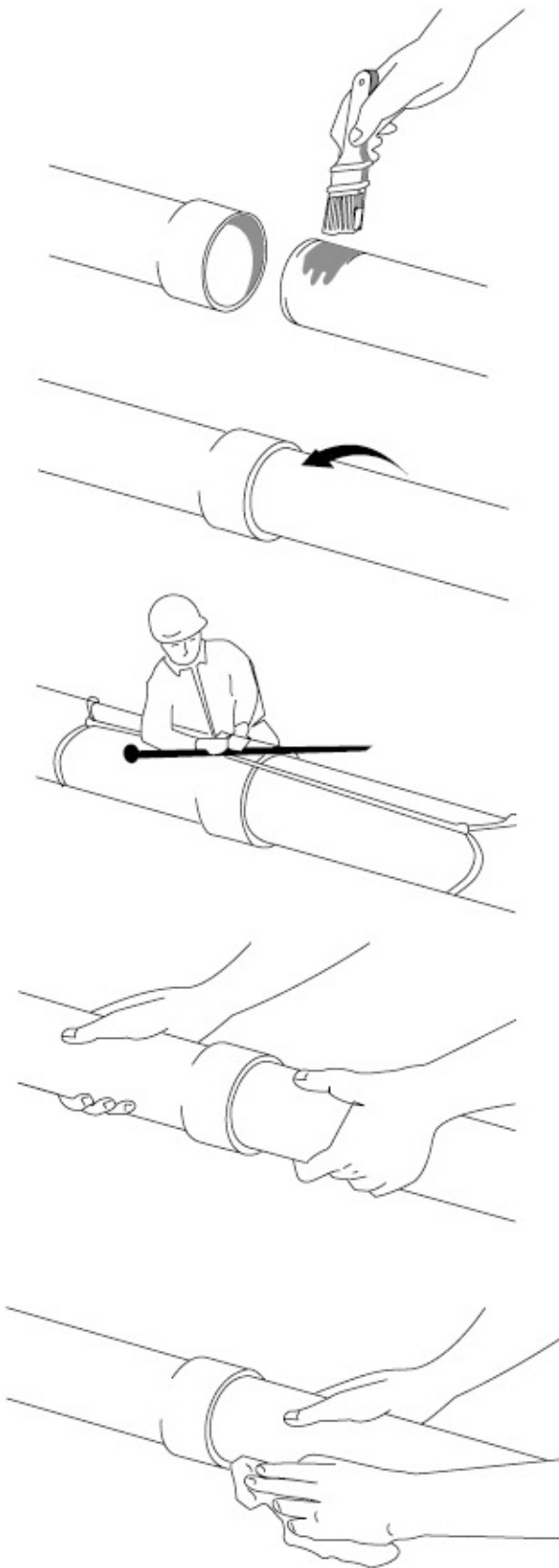
The brush should be large enough to apply the solvent cement to the joint in a maximum of 30 seconds.

Approximately one third the pipe diameter is a good guide. Do not use the brush attached to the lid for pipes over 100mm in diameter. Decanting is not available, and excess should never be returned to the can. For large diameter pipes, it may be necessary to decant to an open larger vessel for a large brush to be used, in this case decant for one joint at a time.



**Table of Recommended Brush Selection**

Diameter size of pipe mm	Recommended size of brush mm
15, 20, 25, 32, 40, 50	Use brush supplied
65, 80	25
100, 125	38
150	50
200	63
225, 250	75
300, 375	100



### 6. Apply Solvent Cement

Using a suitably sized brush, apply a thin even coat of solvent cement to the internal surface of the socket first. Solvents will evaporate faster from the exposed spigot than from the socket. Special care should be taken to ensure that excess solvent cement isn't built up at the back of the socket (pools of solvent will continue to attack the PVC and weaken the pipe). Then apply a heavier, even coat of solvent cement up to the witness mark on the spigot. Ensure the entire surface is covered. A 'dry' patch will not develop a proper bond, even if the mating surface is covered. An unlubricated patch may also make it difficult to obtain full insertion.

### 7. Inserting the Spigot

Make the joint immediately, in a single movement. Do not stop halfway, since the bond will start to set immediately and it will be almost impossible to insert further. It will aid distribution of the solvent cement to twist the spigot into the socket so that it rotates about a  $\frac{1}{4}$  turn whilst (not later) inserting, but where this cannot be done, particular attention should be paid to uniform Solvent application.

### 8. Push the spigot Home

The spigot must be fully homed the full depth of the socket. The final 10 percent of spigot penetration is vital to the interference fit. Mechanical force will be required for larger joints. Be ready in advance. Pipe pullers are commercially available for this purpose. Polyester pipe slings are very useful for gripping a pipe, in order to apply a winch or level.

### 9. Hold the Joint

Hold the joint against movement and rejection of the spigot for a minimum of 30 seconds. Disturbing the joint during this phase will seriously impair the strength of the joint.

### 10. Wipe off Excess Solvent Cement

For a neat professional joint, with a clean rag wipe off excess solvent cement immediately from the outside of the joint.

### 11. Do Not Disturb the Joint

Once the joint is made, do not disturb it for five minutes or rough handle it for at least one hour. Do not fill the pipe with water for at least one hour after making the last joint. Do not pressurise the line until fully cured.

### 12. Cure the Joint

The process of curing, is a function of temperature, humidity and time. Joints cure faster when the humidity is low and the temperature is high. The higher the temperature the faster joints will cure. As a guide, at a temperature of 16°C and above, 24 hours should be allowed, at 0°C, 48 hours is necessary.



## PRODUCT DATA

### Handling and Storage

PVC pipe is very robust, but still can be damaged by rough handling. Pipes should not be thrown from trucks or dragged over rough surfaces.

### Transportation of PVC Pipes

While in transit pipes should be well secured and supported. Chains or wire ropes may be used only if suitably padded to protect the pipe from damage.

Pipes may be unloaded from vehicles by rolling them gently down timbers, care being taken to ensure that the pipes do not fall onto one another or onto any hard or uneven surface.

### Storage of PVC Pipes

Pipes should be given adequate support at all times. Pipes should be stacked in layers with sockets placed alternate ends of the stacks and with the sockets protruding.

### Connection to Cast Iron Pipe

Caulking bush should be used and joints PVC pipes to cast iron pipe socket with approved epoxy jointing compound or 3: 1 sand cement. Lubricate caulking bush seal ring and insert PVC pipe.

### Connection Waste Pipes to Soil Stack

Boss connector should be used.

1. Cut correct hole size and deburr
2. Remove swarf and lean mating surfaces
3. Apply solvent cement to all mating surfaces
4. Pass inner component outward through hole from the inside pipe and push the outer component firmly on to it ensuring that the key and dewey are lined up.
5. Insert toggle bolt and screw up until boss is fully closed with flanges in contact with the pipe both inside and outside

### Connection to WC

WC Connector should be used.

1. Ensure that rubber ring seal is correctly located on rim of connector.
2. Lubricate WC spigot and rubber seal only
3. Insert WC spigot into connector and push together.

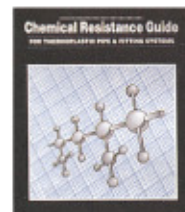
### Design Flow Rate

Please refer to the technical literature 'Flow Charts for PVC Pressure Pipe' provided by Vinidex.



### Chemical Resistance

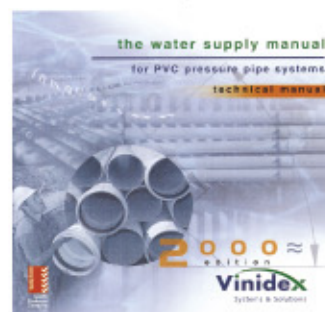
Please refer to the technical literature 'Chemical Resistance Guide for Thermoplastic Pipe & Fitting Systems' provided by Vinidex.



### References

References can be made according to the Technical Literature and CD - ROM prepared by Vinidex

- The Water Supply Manual for PVC Pipe Systems
- Chemical Resistance Guide for Thermoplastic Pipe & Fitting Systems
- Flow Charts for PVC Pressure Pipe
- Solvent Cement & Priming Fluid Jointing Procedure



### Limitation of Liability

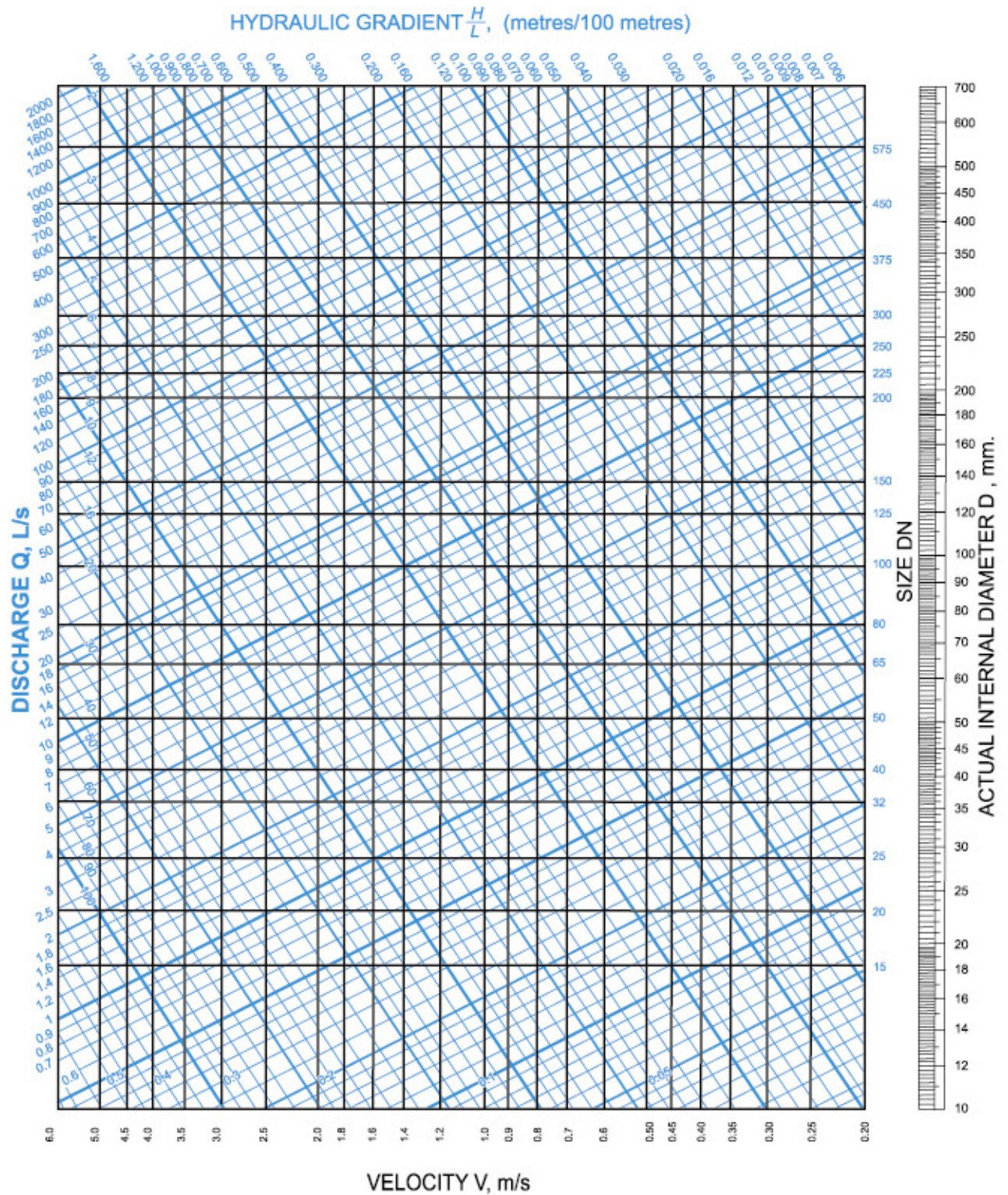
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# FLOW CHART FOR PVC PRESSURE PIPE-PN 18



HYDRAULIC DESIGN OF PIPES  $k = 0.003\text{mm}$  BASED ON COLEBROOK-WHITE FORMULA FOR PIPES FLOWING FULL WITH WATER AT  $20^\circ\text{C}$

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