

Irrigation



Ordering Guide

920

MO

55

G

C

I6

Control Categories	Code
Hydrometer with Magnetic Drive Command	MO
Hydrometer with Magnetic Drive Command & V-Port	MV

Additional Features	Code
No Additional Feature	00
Closing Speed-Control	01
Closing and Opening Speed-Control	03
Hydraulic Override	09
Electronic Control	18
Check Feature	20
Solenoid Controlled & Check Feature	25
Two-Stage Opening	30
Electrically Selected	45
Adjustable Level Setting	48
Temperature Over Pressure Guard	49
Pressure & Position	50
Pressure	51
Pressure	52
Pressure	53
Pressure	54

End Connections	Code
BSP Female Threaded (1½"-3"R Globe & 2" Angle)	BP
NPT Female Threaded (1½"-3"R Globe & 2" Angle)	NP
BSP-U Male Threaded (1½" & 2")	BS
Hydrant 2½" x BSP	HP
Flange (JIS-10) inlet x BSP outlet	JB
ISO-10	10
ISO-16	16
ISO-14 (ISO 10/4 Holes), 3"	14
ANSI-125	A1
ANSI-150	A5
BST-D	BD
JIS-10	J1
JIS-16	J6
ABNT-10	B1
ABNT-16	B6

Ordering Guide

May 2010

BERMAD Irrigation

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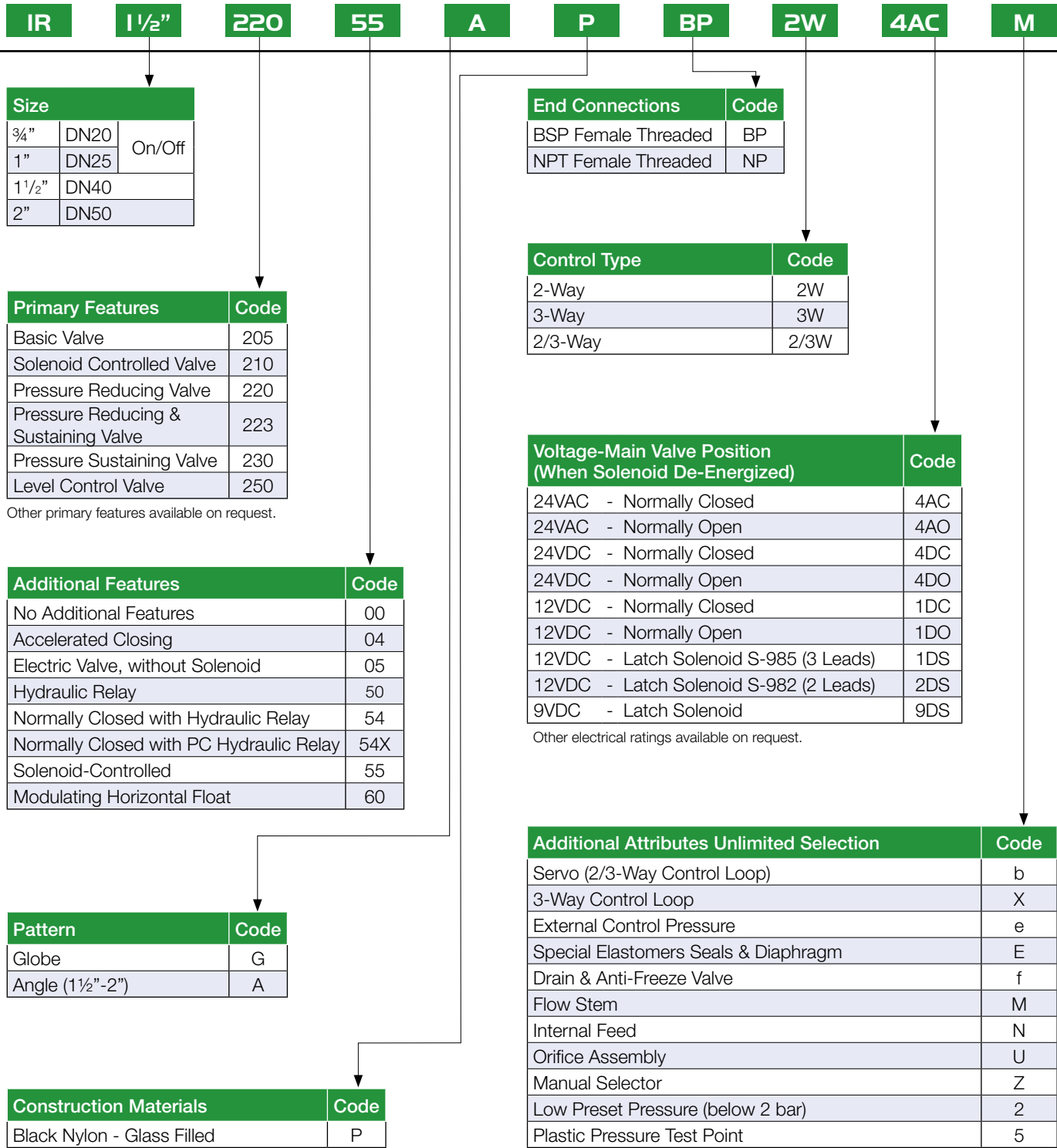
General Notes

- As part of our ongoing effort to provide you with the products that you need, if the characteristics or features that you need are not listed in this ordering guide, please contact BERMAD.
- Some valve categories and features can be mixed and matched. When in doubt, contact BERMAD. This edition supersedes previous editions. We recommend that you discard previous editions.



IR	3"	I20	55	Y	P	BP	4AC	PP	ZX																																														
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BERMAD Irrigation



Double Chamber Hydraulic Control Valves

300 Series

IR 2" 320 55 Y PP BP 3W PCP 4AC PP M

Size	
1½"	DN40 (Brass or Plastic)
2"	DN50 (Brass)
3"	DN80 (Cast Iron-Green)

Primary Features	Code
Basic Valve (Double-Chambered)	300
Basic Valve (Single-Chambered)	305
Solenoid Controlled Valve	310
Pressure Reducing Valve	320
Pressure Sustaining Valve	330
Quick Pressure Relief Valve	33Q
Level Control Valve	350

Other primary features available on request.

Additional Features	Code
No Additional Features	00
Check Feature	20
Hydraulic Relay	50
Normally Closed with Hydraulic Relay	54
Solenoid Controlled	55
Modulating Horizontal Float	60
Bi-Level Electric Float	65
Normally Closed (Hydraulic)	NC

Pattern	Code
Oblique	Y
Oblique Plastic (1.5")	YP
Angle (2")	A

Cover Material	Code
Plastic	P

End Connections		Code
Threaded	BSP Female Threaded (1½"-3")	BP
	NPT Female Threaded (1½"-3")	NP
Flanged	BST-D	BD
	ISO 14 (ISO 10/4 Holes)	14
	ANSI 125	A1
	ABNT 10	B1

Control Type	Code
2-Way	2W
3-Way	3W
2/3-Way	2/3W

Mini Pilot Material	Code
Plastic	PCP (Standard)
Metal	PCM

Voltage-Main Valve Position (When Solenoid De-Energized)	Code
24VAC - Normally Closed	4AC
24VAC - Normally Open	4AO
24VDC - Normally Closed	4DC
24VDC - Normally Open	4DO
12VDC - Normally Closed	1DC
12VDC - Normally Open	1DO
12VDC - Latch Solenoid S-985 (3 Leads)	1DS
12VDC - Latch Solenoid S-982 (2 Leads)	2DS
9VDC - Latch Solenoid	9DS

Other electrical ratings available on request.

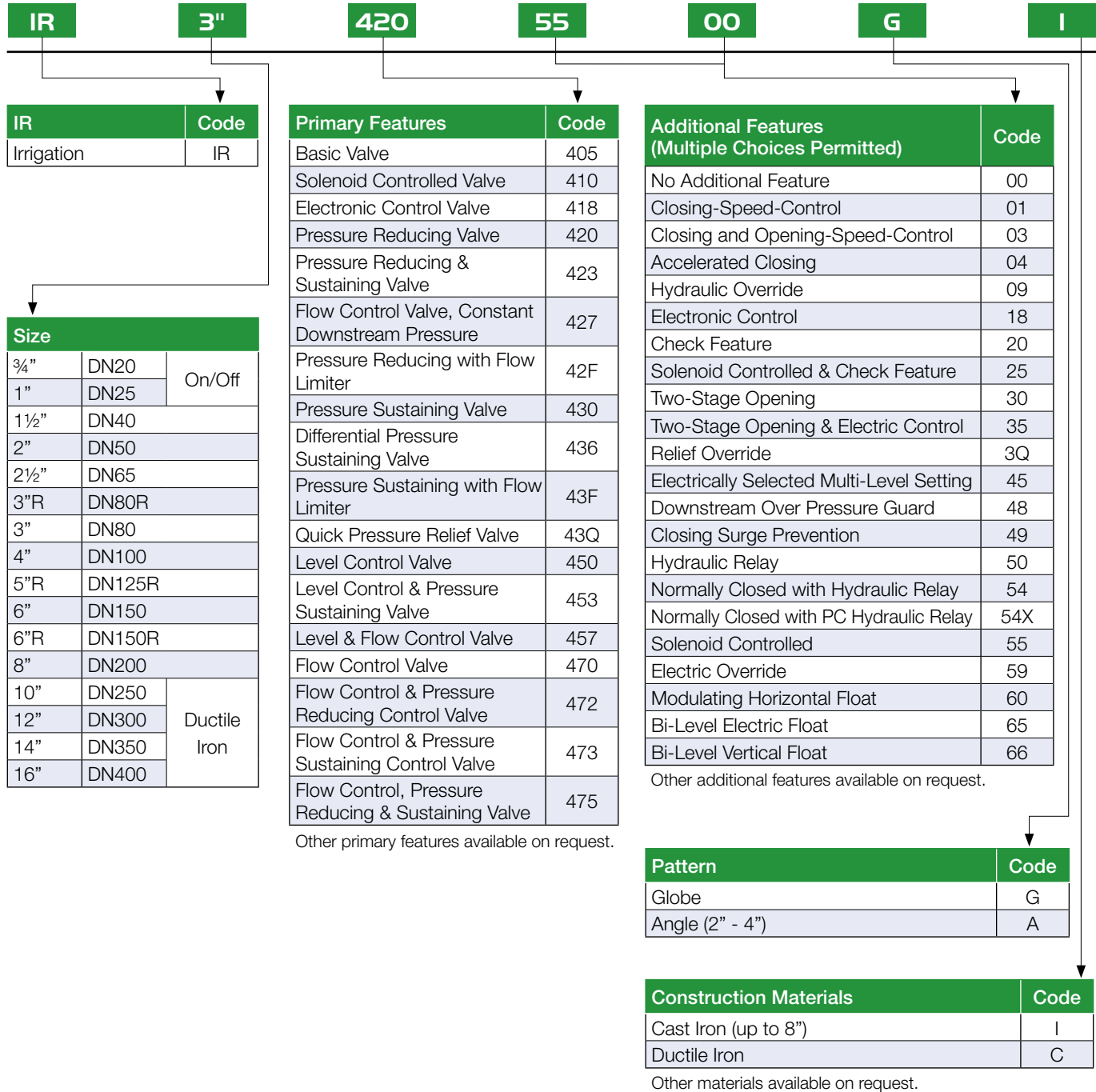
Tubing & Fittings	Code
Plastic Tubing & Fittings	PP
Plastic Reinforced Tubing & Brass Fittings	PB

Other tubing and fittings available on request.

Additional Attributes Unlimited Selection	Code
Servo (2/3-Way Control Loop)	b
3-Way Control Loop	X
Metal Control Accessories	R
Double-Chambered (Active)	B
Special Elastomers Seals & Diaphragm	E
Auxiliary Closing Spring	K
External Control Pressure	e
Lifting Spring	L
Flow Stem	M
Flow Over-the-Seat	O
Industrial Internal Trim (S.S. Trim 3")	T
Orifice Assembly	U
Conic Throttling Disc	V
"Y" Control Strainer	Y
Drain & Anti-Freeze Valve	f
Manual Selector	Z
Low Preset Pressure (below 2 bar)	2
Plastic Pressure Test Point	5
Pressure Gauge (Loose)	6

Other additional attributes are optional. Please consult Customer Service for further information.







I6

PG

4AC

PP

XZ5

End Connections		Code	
Threaded	BSP Female Threaded	3/4" -3"	BP
	NPT Female Threaded		NP
Flanged	ISO-10	10	
	ISO-16	16	
	IS 14 (ISO 10/4 Holes, 3")	14	
	ANSI-125	A1	
	ANSI-150	A5	
	BST-D	BD	
	JIS-10	J1	
	ABNT-10	B1	
Grooved	ABNT-16	B6	
	ANSI C 606-81, Steel Pipe (Globe - 2", 3", 4" & 6"; Angle - 3" & 4")	VI	

Other end connections available on request.

Coating	Code
Polyester Green RAL 6017	PG

Voltage-Main Valve Position (When Solenoid De-Energized)	Code
24VAC, with Diode - Normally Closed	4AC
24VAC, with Diode - Normally Open	4AO
24VAC - Last Position	4AP
24VAC - Normally Closed	4RC
24VAC - Normally Open	4RO
24VDC - Normally Closed	4DC
24VDC - Normally Open	4DO
24VDC - Last Position	4DP
12VDC - Normally Closed	1DC
12VDC - Normally Open	1DO
12VDC - Last Position	1DP
12VDC - Latch Solenoid S-985 (3 Leads)	1DS
12VDC - Latch Solenoid S-982 (2 Leads)	2DS
9VDC - Latch Solenoid	9DS

Other electrical ratings available on request.

Tubing & Fittings	Code
Plastic Tubing & Fittings	PP
Plastic Reinforced Tubing & Brass Fittings	PB
Copper Tubing & Brass Fittings	CB

Additional Attributes Unlimited Selection	Code
Servo (2/3-Way Control Loop)	b
3-Way Control Loop	X
Plastic Control Accessories	K
Metal Control Accessories	R
External Control Pressure	e
Large Control Filter	F
Drain & Anti-Freeze Valve	f
Valve Position Indicator *	I
Flow Stem *	M
Electric Limit Switch *	S
Differential Pressure Duct (2"-8")	D
Orifice Assembly	U
Paddle Flow Control Pilot	V
Manual Selector	Z
Low Preset Pressure (below 2 bar)	2
High Upstream Pressure (above 10 bar)	3
Plastic Pressure Test Point	5
Pressure Gauge	6

* Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M, S.

Other additional attributes are optional.
Please consult Customer Service for further information.

BERMAD Irrigation



Hydraulic Control Valves for Waterworks Systems

WW-700 Series



Sector	Code
Waterworks	WW
Drinking Water	WD
WW Aggressive Water	WA
WW Seawater	WS
WW Air Conditioning	WC
WW Hot Water	WH

Pattern	Code
Oblique (1 1/2-20")	Y
Angle (1 1/2-18")	A
Globe (24-36")	G

Construction Materials	Code
Ductile Iron	C
Cast Steel	S
Stainless Steel 316	N
Nickel Aluminum Bronze	U

Other materials available on request.

Additional Feature (Multiple Options Permitted)	Code	
No Additional Feature	00	
Closing and Opening Speed Control	03	
Differential Pressure	06	
Hydraulic Override	09	
Check-Lock	11	
High Sensitivity Pilot	12*	
Electronic Control	18	
Check Feature	20	
Independent Flow Check (24-32" only)	2S	
Solenoid Controlled & Check Feature	25	
Pressure Reducing Feature	2Q	
Two-Stage Opening	30	
Relief Override	3Q	
Electrically Selected Multi-Level Setting	45	
Downstream Over Pressure Guard	48	
Closing Surge Prevention	49	
Motorized Pilot	4S	
Electronic Multi-Level Setting - Type 4R	4R	
Electronic Multi-Level Setting - Type 4T	4T	
2-Way Hydraulic Relay	50	
3-Way Hydraulic Relay	54	
Solenoid Controlled	55	
Electric Override	59	
Modulating Horizontal Float	60	
Bi-Level Electric Float	65	
Bi-Level Vertical Float	66	
Modulating Vertical Float	67	
Bi-Directional Flow	70	
Altitude Pilot	80*	
Modulating Altitude Control	82*	
Sustaining Altitude Pilot	83*	
Hydraulic Positioning	85*	
Bi-Level Altitude Control	86*	
Altitude Control with Bi-Directional Flow	87*	
Setting Range	2-6 meter; 7-20 feet Setting	M1
	2-14 meter; 7-46 feet Setting	M6
	5-22 meter; 17-72 feet Setting	M5
	15-35 meter; 49-115 feet Setting	M4
	25-70 meter; 82-230 feet Setting	M8
Closing at Downstream Pressure Drop	91	
Cavitation Cage	C1	
Double Cavitation Cage	C2	
Triple Chamber Valve	TC	
Panel Mounted Control	L1	
PRV Low Flow By-Pass	2B	
Proportional	PD	

Size	Primary Feature	Code
1 1/2" DN40	Basic Valve (Double Chambered Actuator)	700
2" DN50	Basic Valve (Single Chambered Actuator)	705
2 1/2" DN65	Solenoid Controlled Valve	710
3" DN80	Electronic Control Valve	718
4" DN100	Pressure Management Valve, Flow Compensated PRV	7PM
5" DN125	Pressure Reducing Control Valve	720
6" DN150	Pressure Reducing & Sustaining Valve	723
8" DN200	Differential Pressure Reducing Valve	726
10" DN250	Flow Control Valve, Constant Downstream Pressure	727
12" DN300	Pressure Sustaining Valve	730
14" DN350	Pressure Relief Valve, Quick Type	73Q
16" DN400	Pressure Sustaining Valve Remote Sensing Type	730R
18" DN450	Surge Anticipating Valve	735
20" DN500	Differential Pressure Sustaining Valve	736
24" DN600	Booster Pump Control Valve, Single Chambered Actuator	740
28" DN700	Booster Pump Control Valve, Double Chambered Actuator	74Q
30" DN750	Booster Pump Control & Pressure Reducing Valve	742
32" DN800	Booster Pump Control & Pressure Sustaining Valve	743
36" DN900	Deep Well Pump Hydraulic Control Valve	744
	Deep Well Pump Electric Control Valve	745
	Booster Pump & Flow Control Valve	747
	Pump Circulation & Pressure Sustaining Valve	748
	Pump Circulation & Flow Control Valve	749
	Level Control Valve	750
	Level Control & Pressure Sustaining Valve	753
	Level & Flow Control Valve	757
	Level Sustaining Valve (Reservoir Outlet)	75A
	Hydraulic Check Valve	760
	Flow Control Valve	770
	Flow Control & Pressure Reducing Valve	772
	Flow Control & Pressure Sustaining Valve	773
	Flow Control, Pressure Reducing & Sustaining Valve	775
	Burst Control Valve (Excessive Flow)	790
	Burst Control & Pressure Reducing Valve	792
	Check Valve (Lift Type)	70N
	Strainer (Stone and Gravel Trap)	70F

Other primary features available on request.

* Other additional features available on request.

* Select Setting Range



BERMAD Irrigation



Hydraulic Control Valves for Waterworks Systems

WW-700 Series

I6

PG

4AC

NN

F

End Connection		Code	
Flanged	ISO-PN10	10	
	ISO-PN16	16	
	ISO-PN25	25	
	ANSI-#150	A5	
	ANSI-#300	A3	
	BST-D	BD	
	JIS-7.5	J7	
	JIS-10	J1	
Threaded	JIS-16	J6	
	JIS-20	J2	
	BSP	(up to 3") BP	
	BSP-25 bar		PH
	NPT		NP
	NPT-25 bar		NH

Other end connections available on request.

Voltage-Main Valve Position (When Solenoid De-energized)		Code			
24V	AC	24VAC/50Hz - Normally Closed	4AC		
		24VAC/50Hz - Normally Open	4AO		
		24VAC/50Hz - Last Position	4AP		
		24VAC/60Hz - Normally Closed	46C		
		24VAC/60Hz - Normally Open	46O		
	DC	24VDC - Normally Closed	4DC		
		24VDC - Normally Open	4DO		
		24VDC - Last Position	4DP		
		24VDC - Latch Solenoid	4DS		
		220V	AC	220VAC/50-60Hz - Last Position	2AP
220VAC/50-60Hz - Normally Closed	2AC				
220VAC/50-60Hz - Normally Open	2AO				
DC	220VDC - Normally Closed		2DC		
	220VDC - Normally Open		2DO		
	220VDC - Latch Solenoid		2DS		
	110V		AC	110VAC/50-60Hz - Normally Closed	5AC
				110VAC/50-60Hz - Normally Open	5AO
			DC	110VDC - Normally Closed	5DC
110VDC - Normally Open		5DO			
12V	DC	12VDC - Normally Closed	1DC		
		12VDC - Normally Open	1DO		
		12VDC - Last Position	1DP		
		12VDC - Latch Solenoid	1DS		

Tubing & Fittings	Code
Copper Tubing & Brass Fittings	CB
St. St. 316 Tubing & Fittings	NN
Plastic Reinforced Tubing & Brass Fittings	PB
Monel Tubing & Fittings	MM

Additional Attributes (Multiple Options Permitted)	Code
V-Port Throttling Plug	V
Large Control Filter	F
Valve Position Indicator	I
Electric Limit Switch	S
Valve Position Transmitter	Q
Flow Stem	M
Lifting Spring	L
Balancing Piston Assembly	G
Orifice Assembly	U
Pressure Separator	d
Double Chambered (Active)	B
External Control Pressure	e
3-Way Control	X
Manual Selector	Z
Flow Over the Seat	O
St. St. 316 Control Accessories	N
St. St. 316 Actuator Internal Assembly	D
St. St. 316 Internal Trim (Closure & Seat)	T
Delrin Bearing	R
PVDF Bearing	r
High Grade Bearing & Stem	K
St. St 316. Bolts & Nuts	m
Special Elastomers for Seals & Diaphragm	E
Pressure Gauge	6

Other additional attributes are optional. Please consult our sales department for further information.

Reduction Ratios Table

Valve Size	Plug Type	
	Flat Disk	V-Port
1 1/2 - 2 1/2" DN40 - 65	3.7	4
3" DN80	2.6	2.9
4" DN100	2.5	2.8
6" DN150	2.5	2.7
8" DN200	2.4	2.6
10" DN250	2.3	2.5
12-14" DN300 - 350	2.2	2.4
16-20" DN400 - 500	2.2	2.3
24-36" DN600 - 900	2.2	2.3

- The reduction ratios are based on flow velocity of 2.0-3.0 m/sec.
- Reduction ratio may vary at extreme flow velocity & upstream pressure.

Coating	Code
Polyester Green RAL 6017	PG
Epoxy FB Blue RAL 5005	EB
Polyester Blue RAL 5010	PB
Uncoated	UC

Other coatings available on request.

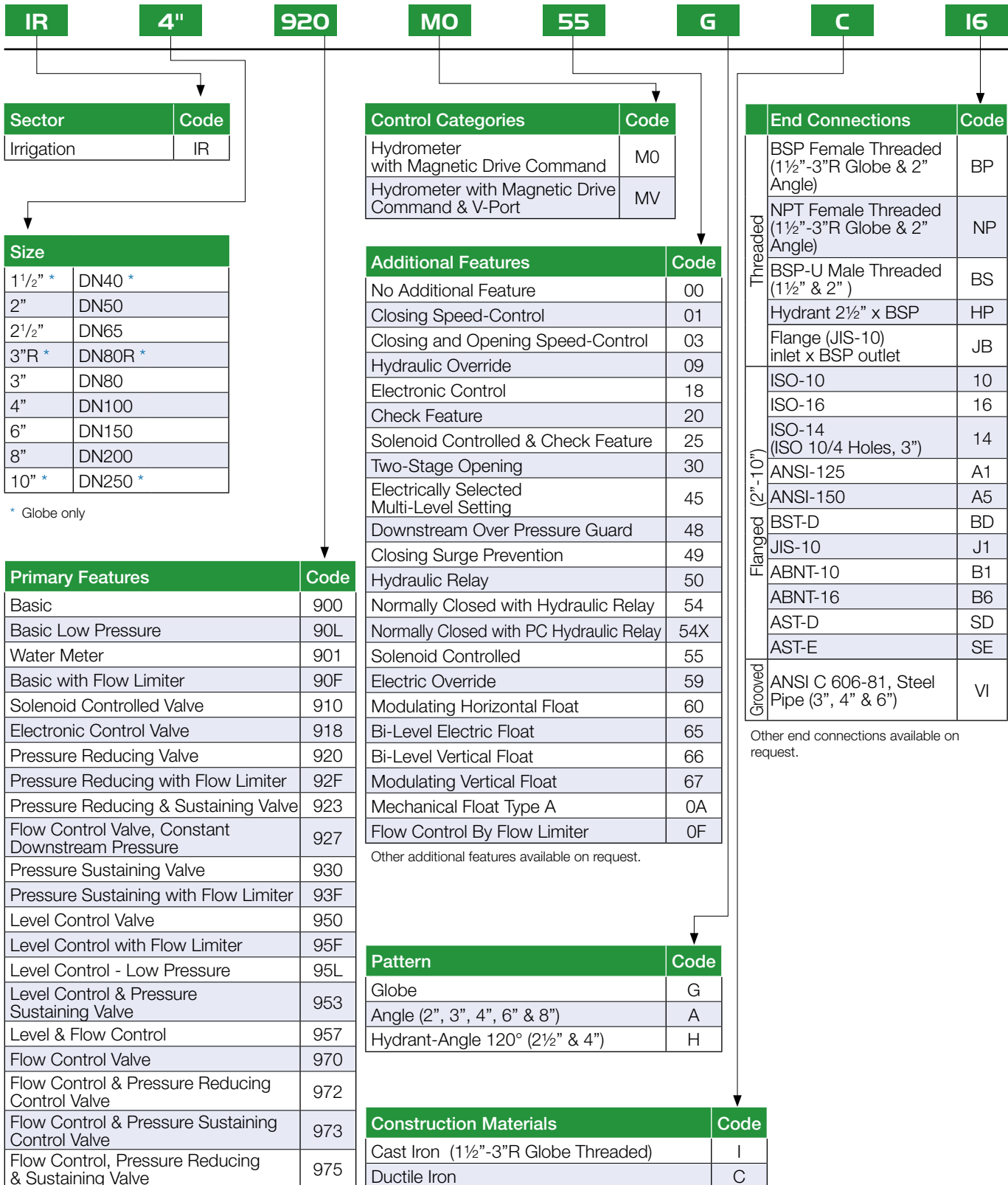


BERMAD Irrigation



Hydrometers with Magnetic Drive

900-M Series



BERMAD Irrigation



Hydrometers with Magnetic Drive

900-M Series

PG		4AC		PP		WAT		RO3		KX							
Coating		Code		Dial Capacity		Code		Pulse Type		Pulse Rate m³		Code		Additional Attributes Unlimited Selection		Code	
Polyester Green RAL 6017		PG		Hydrometer		WAT		No Pulse		No Pulse m ³		RNP		3-Way Control Loop		X	
Other coatings available on request.								Reed Switch 1 Pulse		Reed 0.01 m ³		R01		Plastic Control Accessories		K	
Voltage Main Valve Position		Code						Reed Switch 2 Pulses		Reed 0.1 m ³		R02		Metal Control Accessories		R	
24VAC, with Diode - Normally Closed		4AC						Reed Switch 2 Pulses		Reed 1 m ³		R03		PVDF Guide		r	
24VAC, with Diode - Normally Open		4AO						Reed Switch 2 Pulses		Reed 10 m ³		R04		Homologation Approved		L	
24VAC - Last Position		4AP						Reed Switch 2 Pulses		Reed 0.1 m ³ + 0.01 m ³		R12		BSP-U Union Records Assembly		M	
24VAC - Normally Closed		4RC						Reed Switch 2 Pulses		Reed 1 m ³ + 0.1 m ³		R23		Calibration		N	
24VAC - Normally Open		4RO						Reed Switch 2 Pulses		Reed 10 m ³ + 1 m ³		R34		Orifice Assembly		U	
24VDC - Normally Closed		4DC						Reed Switch 2 Pulses		Reed 0.001 m ³		P01		Paddle Flow Control Pilot		V	
24VDC - Normally Open		4DO						Reed Switch 2 Pulses		Reed 0.01 m ³		P10		Drain & Anti-Freeze Valve		f	
24VDC - Last Position		4DP						Reed Switch 2 Pulses		0.001 m ³ Opto + 0.1 m ³ Reed		PQ1		Large Control Filter		F	
12VDC - Normally Closed		1DC						Reed Switch 2 Pulses		0.001 m ³ Opto + 1 m ³ Reed		P03		Y Control Strainer		Y	
12VDC - Normally Open		1DO						Reed Switch 2 Pulses		0.01 m ³ Opto + 1 m ³ Reed		P13		Manual Selector		Z	
12VDC - Last Position		1DP						Reed Switch 2 Pulses		0.01 m ³ Opto + 10 m ³ Reed		P14		Low Preset Pressure (below 2 bar)		2	
12VDC - Latch Solenoid S-985 (3 Leads)		1DS						Reed Switch 2 Pulses						High Upstream Pressure (above 10 bar)		3	
12VDC - Latch Solenoid S-982 (2 Leads)		2DS						Reed Switch 2 Pulses						Plastic Pressure Test Point		5	
9VDC - Latch Solenoid		9DS						Reed Switch 2 Pulses						Pressure Gauge		6	
Other electrical ratings available on request.														Other additional attributes are optional. Please consult Customer Service for further information.			
Tubing & Fittings		Code		Pulse Type		Pulse Rate U.S. Gallon		Code									
Plastic Tubing & Fittings		PP		No Pulse		No Pulse Gal		RNG									
Plastic Reinforced Tubing & Brass Fittings		PB		Reed Switch 1 Pulse		Reed 1 Gal		RG3									
Copper Tubing & Brass Fittings		CB		Reed Switch 1 Pulse		Reed 10 Gal		RG4									
				Reed Switch 1 Pulse		Reed 100 Gal		RG5									
				Reed Switch 1 Pulse		Reed 1,000 Gal		RG6									
				Reed Switch 2 Pulses		Reed 10 Gal + 1 Gal		G34									
				Reed Switch 2 Pulses		Reed 100 Gal + 10 Gal		G45									
				Reed Switch 2 Pulses		Reed 1,000 Gal + 10 Gal		G46									
				Reed Switch 2 Pulses		Reed 1,000 Gal + 100 Gal		G56									
				Opto Sensor		Opto 0.1 Gal		PG2									
				Opto Sensor		Opto 1 Gal		PG3									
				Opto + Reed		0.1 Gal Opto + 10 Gal Reed		P4G									
				Opto + Reed		0.1 Gal Opto + 100 Gal Reed		P6G									
				Opto + Reed		1 Gal Opto + 100 Gal Reed		P5G									
				Opto + Reed		1 Gal Opto + 1,000 Gal Reed		P7G									

Hydrometer Pulse & Size Availability

Size	Pulse per	0.001 m ³	0.01 m ³	0.1 m ³	1 m ³	10 m ³
		0.1 Gal	1 Gal	10 Gal	100 Gal	1,000 Gal
1½", 2", 2½", 3"R, 3" & 4"		■	▲	▲	▲	
6", 8" & 10"			■	▲	▲	▲

- ▲ Reed-switch
- Opto-Electric

Gal = U.S. Gallon

Note: Pulse combinations are available according to "Pulse Rate Table".

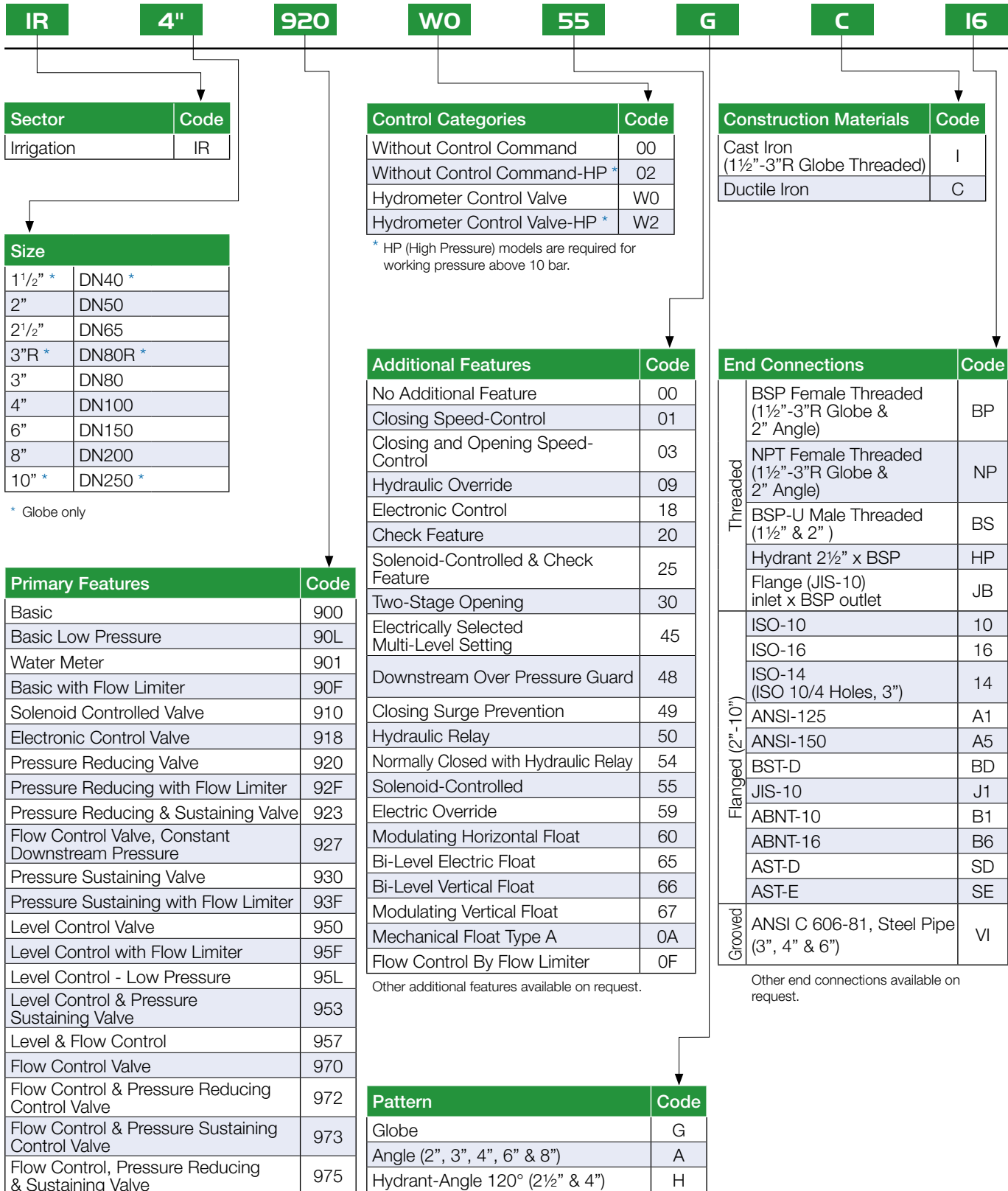


BERMAD Irrigation



Hydrometers with Mechanic Drive

900-W Series



Sector	Code
Irrigation	IR

Size	
1 1/2" *	DN40 *
2"	DN50
2 1/2"	DN65
3"R *	DN80R *
3"	DN80
4"	DN100
6"	DN150
8"	DN200
10" *	DN250 *

* Globe only

Primary Features	Code
Basic	900
Basic Low Pressure	90L
Water Meter	901
Basic with Flow Limiter	90F
Solenoid Controlled Valve	910
Electronic Control Valve	918
Pressure Reducing Valve	920
Pressure Reducing with Flow Limiter	92F
Pressure Reducing & Sustaining Valve	923
Flow Control Valve, Constant Downstream Pressure	927
Pressure Sustaining Valve	930
Pressure Sustaining with Flow Limiter	93F
Level Control Valve	950
Level Control with Flow Limiter	95F
Level Control - Low Pressure	95L
Level Control & Pressure Sustaining Valve	953
Level & Flow Control	957
Flow Control Valve	970
Flow Control & Pressure Reducing Control Valve	972
Flow Control & Pressure Sustaining Control Valve	973
Flow Control, Pressure Reducing & Sustaining Valve	975

Other primary features available on request.

Control Categories	Code
Without Control Command	00
Without Control Command-HP *	02
Hydrometer Control Valve	W0
Hydrometer Control Valve-HP *	W2

* HP (High Pressure) models are required for working pressure above 10 bar.

Additional Features	Code
No Additional Feature	00
Closing Speed-Control	01
Closing and Opening Speed-Control	03
Hydraulic Override	09
Electronic Control	18
Check Feature	20
Solenoid-Controlled & Check Feature	25
Two-Stage Opening	30
Electrically Selected Multi-Level Setting	45
Downstream Over Pressure Guard	48
Closing Surge Prevention	49
Hydraulic Relay	50
Normally Closed with Hydraulic Relay	54
Solenoid-Controlled	55
Electric Override	59
Modulating Horizontal Float	60
Bi-Level Electric Float	65
Bi-Level Vertical Float	66
Modulating Vertical Float	67
Mechanical Float Type A	0A
Flow Control By Flow Limiter	0F

Other additional features available on request.

Pattern	Code
Globe	G
Angle (2", 3", 4", 6" & 8")	A
Hydrant-Angle 120° (2 1/2" & 4")	H

Construction Materials	Code
Cast Iron (1 1/2"-3"R Globe Threaded)	I
Ductile Iron	C

End Connections	Code	
Threaded	BSP Female Threaded (1 1/2"-3"R Globe & 2" Angle)	BP
	NPT Female Threaded (1 1/2"-3"R Globe & 2" Angle)	NP
	BSP-U Male Threaded (1 1/2" & 2")	BS
	Hydrant 2 1/2" x BSP	HP
	Flange (JIS-10) inlet x BSP outlet	JB
	Flanged (2"-10")	ISO-10
ISO-16		16
ISO-14 (ISO 10/4 Holes, 3")		14
ANSI-125		A1
ANSI-150		A5
BST-D		BD
JIS-10		J1
ABNT-10		B1
Grooved	ABNT-16	B6
	AST-D	SD
	AST-E	SE
ANSI C 606-81, Steel Pipe (3", 4" & 6")	VI	

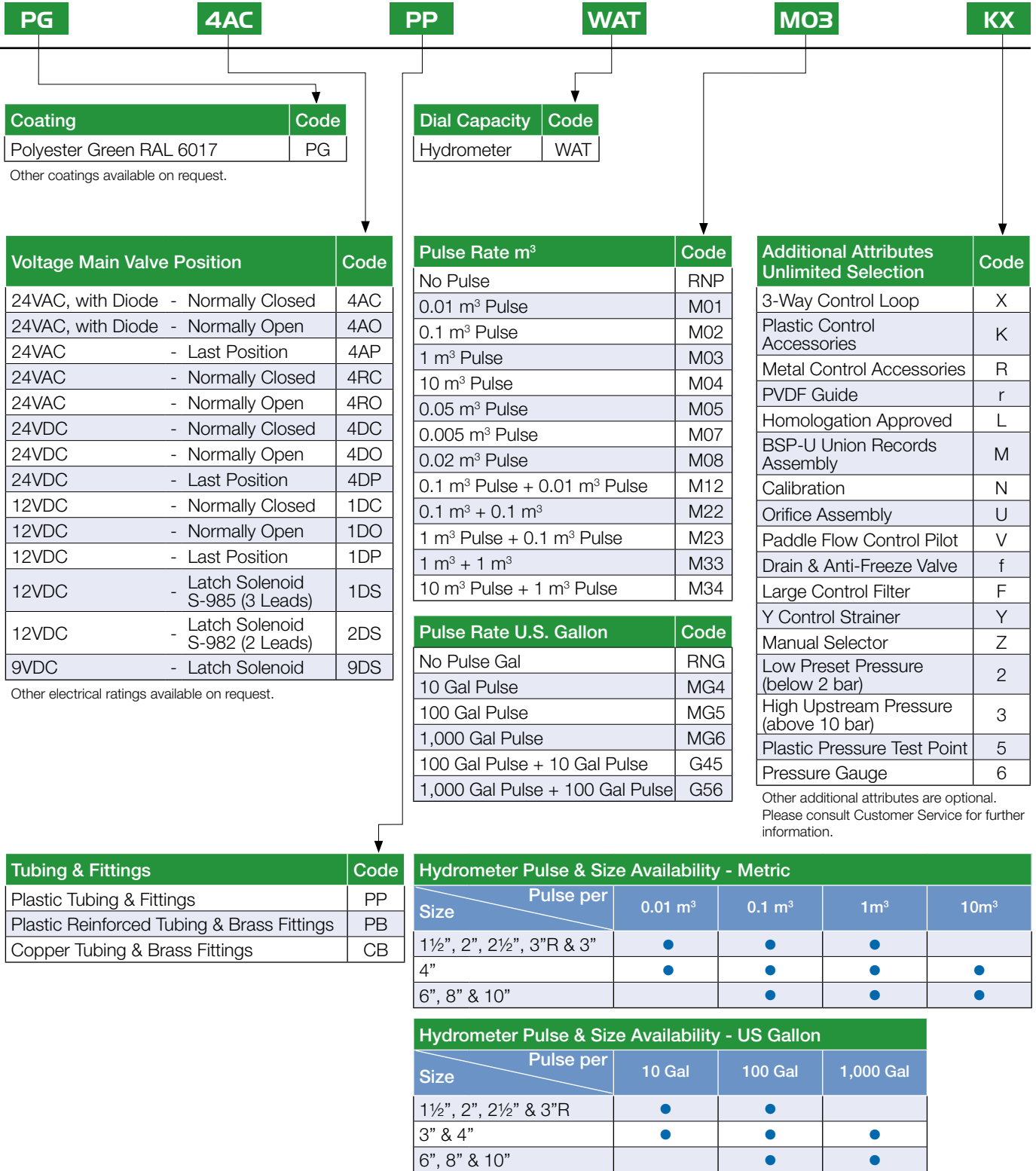
Other end connections available on request.

BERMAD Irrigation



Hydrometers with Mechanic Drive

900-W Series



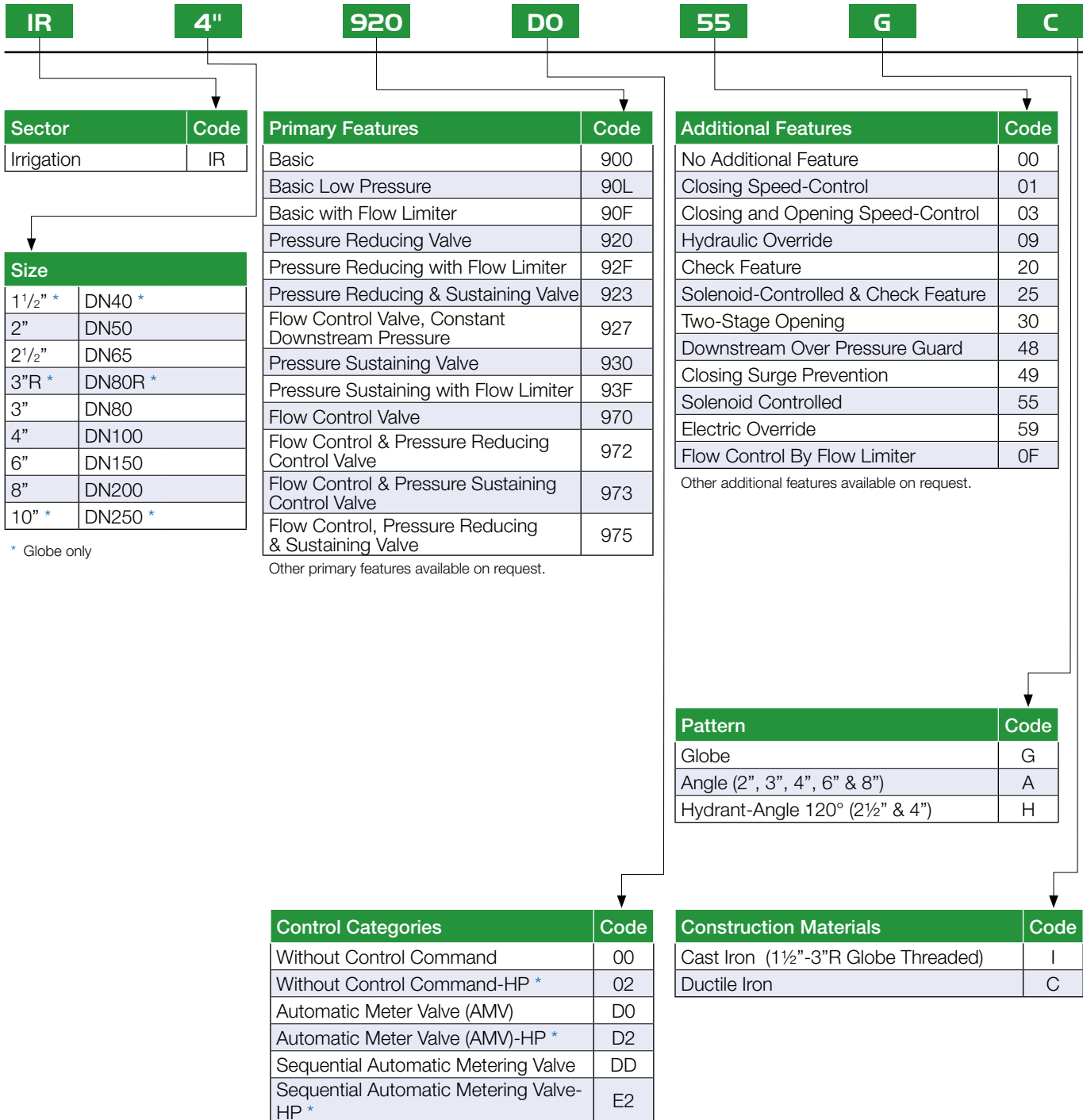
Note: Pulse combinations are available according to "Pulse Rate Table".

BERMAD Irrigation



Automatic Metering Valves (AMV)

900-D Series



Sector	Code
Irrigation	IR

Size	
1½" *	DN40 *
2"	DN50
2½"	DN65
3"R *	DN80R *
3"	DN80
4"	DN100
6"	DN150
8"	DN200
10" *	DN250 *

* Globe only

Primary Features	Code
Basic	900
Basic Low Pressure	90L
Basic with Flow Limiter	90F
Pressure Reducing Valve	920
Pressure Reducing with Flow Limiter	92F
Pressure Reducing & Sustaining Valve	923
Flow Control Valve, Constant Downstream Pressure	927
Pressure Sustaining Valve	930
Pressure Sustaining with Flow Limiter	93F
Flow Control Valve	970
Flow Control & Pressure Reducing Control Valve	972
Flow Control & Pressure Sustaining Control Valve	973
Flow Control, Pressure Reducing & Sustaining Valve	975

Other primary features available on request.

Additional Features	Code
No Additional Feature	00
Closing Speed-Control	01
Closing and Opening Speed-Control	03
Hydraulic Override	09
Check Feature	20
Solenoid-Controlled & Check Feature	25
Two-Stage Opening	30
Downstream Over Pressure Guard	48
Closing Surge Prevention	49
Solenoid Controlled	55
Electric Override	59
Flow Control By Flow Limiter	0F

Other additional features available on request.

Pattern	Code
Globe	G
Angle (2", 3", 4", 6" & 8")	A
Hydrant-Angle 120° (2½" & 4")	H

Control Categories	Code
Without Control Command	00
Without Control Command-HP *	02
Automatic Meter Valve (AMV)	D0
Automatic Meter Valve (AMV)-HP *	D2
Sequential Automatic Metering Valve	DD
Sequential Automatic Metering Valve-HP *	E2

* HP (High Pressure) models are required for working pressure above 10 bar.

Construction Materials	Code
Cast Iron (1½"-3"R Globe Threaded)	I
Ductile Iron	C

BERMAD Irrigation



Automatic Metering Valves (AMV)

900-D Series

I6	PG	4AC	PP	800	AMV	KX																																																																																																																																																						
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Turbo-IR-A

Type
Turbo-IR-A

Size	
2"	DN50
2½"	DN65
3"	DN80
4"	DN100
5"	DN125
6"	DN150
8"	DN200
10"	DN250
12"	DN300

End Connections	Code
ISO-10	10
ISO-16	16
ISO-14 (ISO 10/4 Holes, 3")	14
ANSI-125	A1
BST-D	BD
AST-D	SD
AST-E	SE
ABNT-10	B1
ABNT-16	B6
JIS-10	J1
JIS-16	J6

Other end connections available on request.

3"

16

PG

Measure Units	Code
Polyester Green	PG

Measure Units	Code
Cubic Meter	M3

M3

Pulse Type	Pulse Rate	Code
No Pulse*	Pulse Preparation	Y
Reed Switch - 1 Pulse	Reed 0.1 m ³	S3
	Reed 1 m ³	S2
	Reed 10 m ³	S1
Reed Switch - 2 Pulses	Reed 1 m ³ + 0.1 m ³	S23
	Reed 10 m ³ + 1 m ³	S12

* When ordering "No Pulse" (Pulse Preparation) write "Y" & the possible future Pulse Rate
Example: Turbo-IR-A-3"-16-PG-M3-Y/S3

S3

Turbo-IR Pulse Rate				
Size	One pulse per	0.1 m ³	1 m ³	10 m ³
2", 2½", 3", 4", 5"		▲	▲	
6", 8", 10", 12"			▲	▲

▲ Reed-switch

Note: Pulse combinations are available according to "Pulse Rate Table".

BERMAD Irrigation



Woltman Turbine Type

Turbo-Bar WPH

Turbo-Bar WPH

4"

16

PB

M3

S3

Size		End Connections		Code	Coating		Code	Meter Units		Code
1 1/2"	DN40	ISO-10		10	Polyester Blue RAL 5010		PB	U.S. Gallon	Gal	
2"	DN50	ISO-16		16	Epoxy FB Blue RAL 5005 (up to 6")		EB	Cubic Meter	M3	
2 1/2"	DN65	ISO-14 (ISO 10/4 Holes, 3")		14						
3"	DN80	ANSI-125		A1						
4"	DN100	BST-D		BD						
5"	DN125	AST-D		SD						
6"	DN150	AST-E		SE						
8"	DN200	ABNT-10		B1						
10"	DN250	ABNT-16		B6						
12"	DN300	JIS-10		J1						
16"	DN400	JIS-16		J6						
20"	DN500	Other end connections available on request.								

Pulse Type	Pulse Rate m ³	Code
No Pulse*	Pulse Preparation	Y
Reed Switch 1 Pulse	Reed 0.01 m ³	S4
	Reed 0.1 m ³	S3
	Reed 1 m ³	S2
	Reed 10 m ³	S1
	Reed 100 m ³	S8
Reed Switch 2 Pulses	Reed 0.1 m ³ + 0.01 m ³	S34
	Reed 1 m ³ + 0.1 m ³	S23
	Reed 10 m ³ + 1 m ³	S12
	Reed 100 m ³ + 10 m ³	S81
Opto Sensor	Opto 0.001 m ³	SA
	Opto 0.01 m ³	SB
	Opto 0.1 m ³	SC
Opto + Reed	0.001 m ³ Opto + 0.1 m ³ Reed	SA3
	0.001 m ³ Opto + 1 m ³ Reed	SA2
	0.01 m ³ Opto + 1 m ³ Reed	SB2
	0.01 m ³ Opto + 10 m ³ Reed	SB1
	0.1 m ³ Opto + 10 m ³ Reed	SC1
	0.1 m ³ Opto + 100 m ³ Reed	SC8

Pulse Type	Pulse Rate U.S. Gallon	Code
No Pulse*	Pulse Preparation	Y
Reed Switch 1 Pulse	Reed 1 Gal	S4
	Reed 10 Gal	S3
	Reed 100 Gal	S2
	Reed 1,000 Gal	S1
	Reed 10,000 Gal	S8
	Reed Switch 2 Pulses	Reed 10 Gal + 1 Gal
Reed 100 Gal + 10 Gal		S23
Reed 1,000 Gal + 100 Gal		S12
Reed 10,000 Gal + 1,000 Gal		S81
Opto Sensor	Opto 0.1 Gal	SA
	Opto 1 Gal	SB
	Opto 10 Gal	SC
Opto + Reed	0.1 Gal Opto + 10 Gal Reed	SA3
	0.1 Gal Opto + 100 Gal Reed	SA2
	1 Gal Opto + 100 Gal Reed	SB2
	1 Gal Opto + 1,000 Gal Reed	SB1
	10 Gal Opto + 1,000 Gal Reed	SC1
	10 Gal Opto + 10,000 Gal Reed	SC8

* When ordering "No Pulse" (Pulse Preparation) write "Y" & the possible future Pulse Rate
Example: Turbo-Bar WPH-4"-16-PG-M3-Y/S3

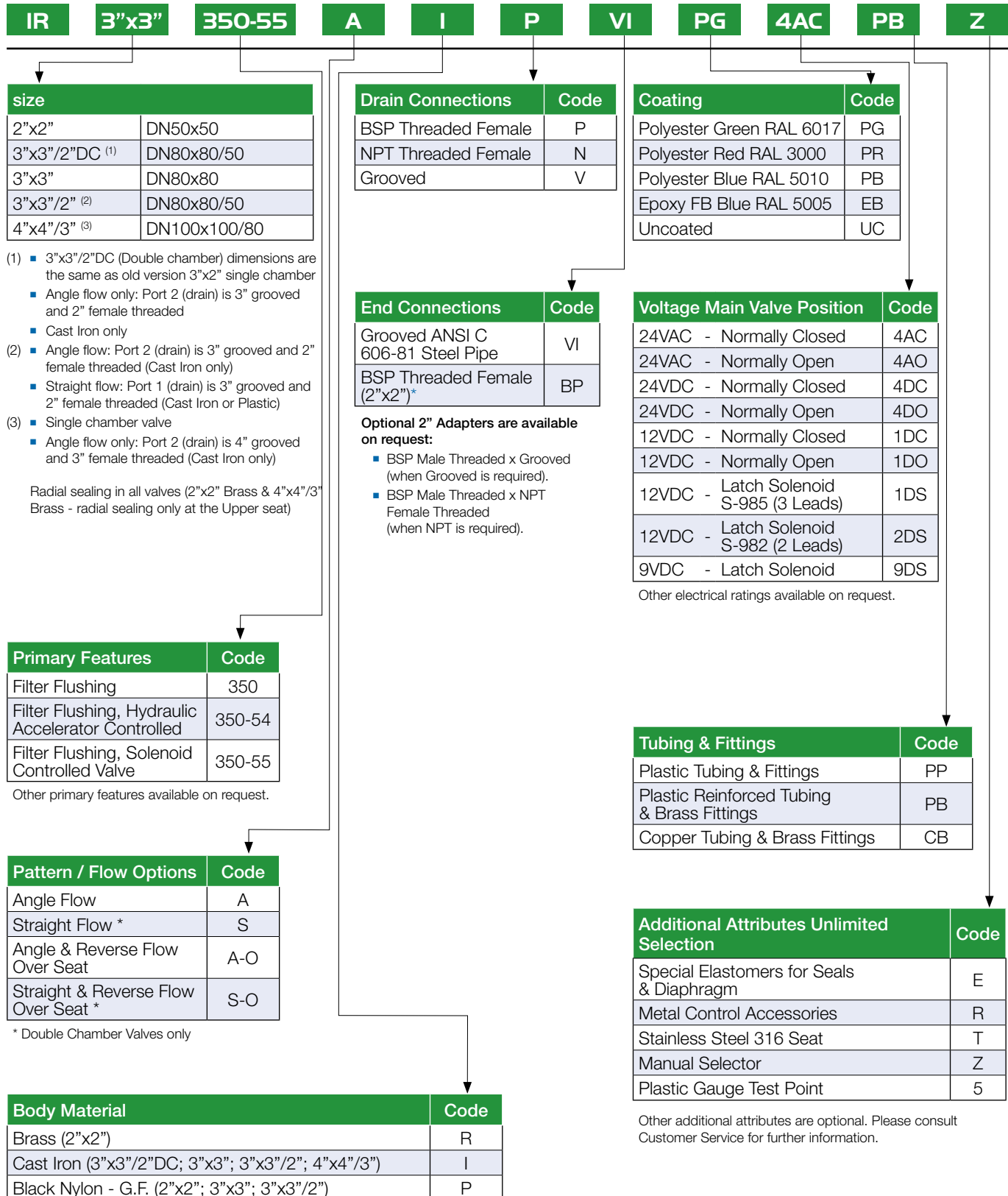
Turbo-Bar Pulse & Size Availability - Metric							
Size	One pulse per	Pulse Rate					
		0.001 m ³	0.01 m ³	0.1 m ³	1m ³	10m ³	100m ³
1 1/2", 2", 2 1/2", 3", 4", 5"		■	▲	▲	▲		
6", 8"			■	▲	▲	▲	
10"			■	▲	■	▲	▲
12", 16", 20"				■	▲	▲	▲

Turbo-Bar Pulse & Size Availability - US Gallon						
Size	One pulse per	Pulse Rate				
		1 Gal	10 Gal	100 Gal	1,000 Gal	10,000 Gal
1 1/2" - 6"		■	▲	▲	▲	
8" - 20"			■	▲	▲	▲

- ▲ Reed Switch (standard)
- Opto Electric (standard)
- ▲ Reed Switch (on request)
- Opto Electric (on request)

Note: Pulse combinations are available according to "Pulse Rate Table"





BERMAD Irrigation



Diaphragm Hydraulic Control Valves - PN 10

GR 400 Series

GR 1 1/2" 420 55 G R BP 3W PCP 4AC PP Z

Size		
3/4"	DN20	On/Off
1"	DN25	
1 1/2"	DN40	
2"	DN50	

Primary Features	Code
Basic Valve	405
Basic Hydraulic with Union Record	40R
Solenoid Controlled Valve	410
Pressure Reducing Valve	420
Pressure Reducing Valve with Union Record	42R
Pressure Reducing & Sustaining Valve	423
Pressure Sustaining Valve	430
Quick Pressure Relief Valve	43Q

Other primary features available on request.

Additional Features	Code
No Additional Features	00
Hydraulic Relay	50
Normally Closed with Hydraulic Relay	54
Solenoid Controlled	55
Relief Override	3Q

Pattern	Code
Globe	G

Body Material	Code
Brass	R

End Connections	Code
BSP Female Threaded	BP
NPT Female Threaded	NP
BSP-U Male Threaded inlet (1"-2")	BS
NPT-U Male Threaded inlet (1"-2")	NS

Control Type	Code
2-Way	2W
3-Way	3W
2/3-Way	2/3W

Mini Pilot Material	Code
Plastic	PCP (Standard)
Metal	PCM

Voltage-Main Valve Position (When Solenoid De-Energized)	Code
24VAC - Normally Closed	4AC
24VAC - Normally Open	4AO
24VDC - Normally Closed	4DC
24VDC - Normally Open	4DO
12VDC - Normally Closed	1DC
12VDC - Normally Open	1DO
12VDC - Latch Solenoid S-985 (3 Leads)	1DS
12VDC - Latch Solenoid S-982 (2 Leads)	2DS
9VDC - Latch Solenoid	9DS

Other electrical ratings available on request.

Tubing & Fittings	Code
Plastic Tubing & Fittings	PP
Plastic Reinforced Tubing & Brass Fittings	PB
Copper Tubing & Brass Fittings	CB

Additional Attributes Unlimited Selection	Code
Servo (2/3-Way Control Loop)	b
3-Way Control Loop	X
Plastic Control Accessories	K
Metal Control Accessories	R
Manual Selector	Z
Low Preset Pressure (below 2 bar)	2
Plastic Gauge Test Point	5

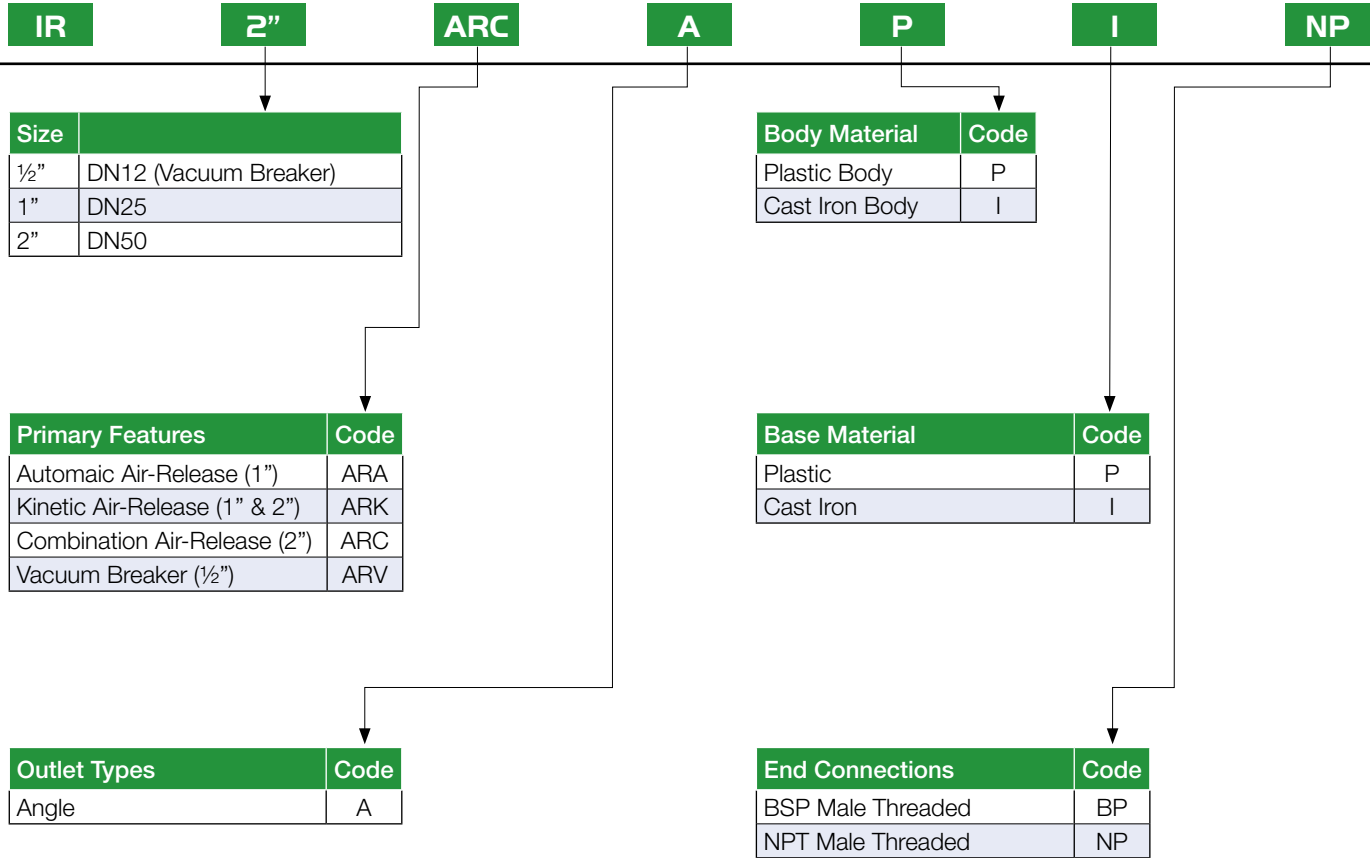
Other additional attributes are optional. Please consult Customer Service for further information.

BERMAD Irrigation



Air & Vacuum Release Valves

AR Series



BERMAD Irrigation



Adjustable Direct-Acting Pressure Reducers

PRV Series

IR **¾"** **PRV** **05** **FF** **P** **BP** **L** **A**

Size	
¾"	DN20
1"	DN25
1½"	DN40
2"	DN50

Model	Code
Adjustable Direct Acting Pressure Reducers	PRV

Flow Rate Ranges	Code
Standard	00
Low Flow	05
Drip-Tight Sealing & Low Flow (1", 1½", 2")	07

Connection Categories	Code
Female-Female	FF
Male-Female (¾")	MF

Body Material	Code
Plastic (¾", 1" & 1½")	P
Brass (1½" & 2")	R

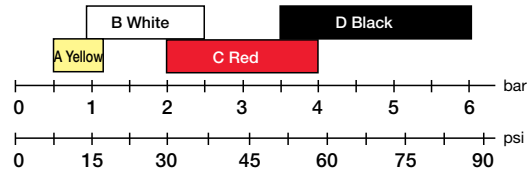
End Connections	Code
Threaded BSP	BP
Threaded NPT	NP

Optional Features	Code
Flow Stem (1") *	M
Flow Straightener (¾" Male-Female)	L

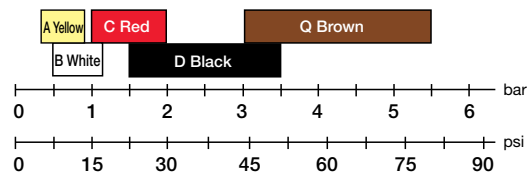
* 1" PRV 07 with Flow Stem is **Standard Flow** & Drip Tight Sealing

Springs	Code
Use Spring Selection Diagram according to Size & Pressure Range	A
	B
	C
	D
	Q

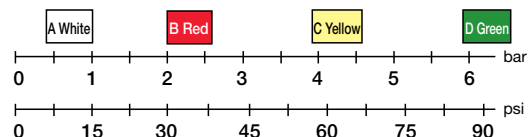
¾" Springs Selection Diagram & Pressure Range		
Spring	Pressure Range - bar	Pressure Range - psi
A	0.5 - 1.2	7 - 18
B	0.8 - 2.5	12 - 36
C	2.0 - 4.0	29 - 58
D	3.5 - 6.0	50 - 87

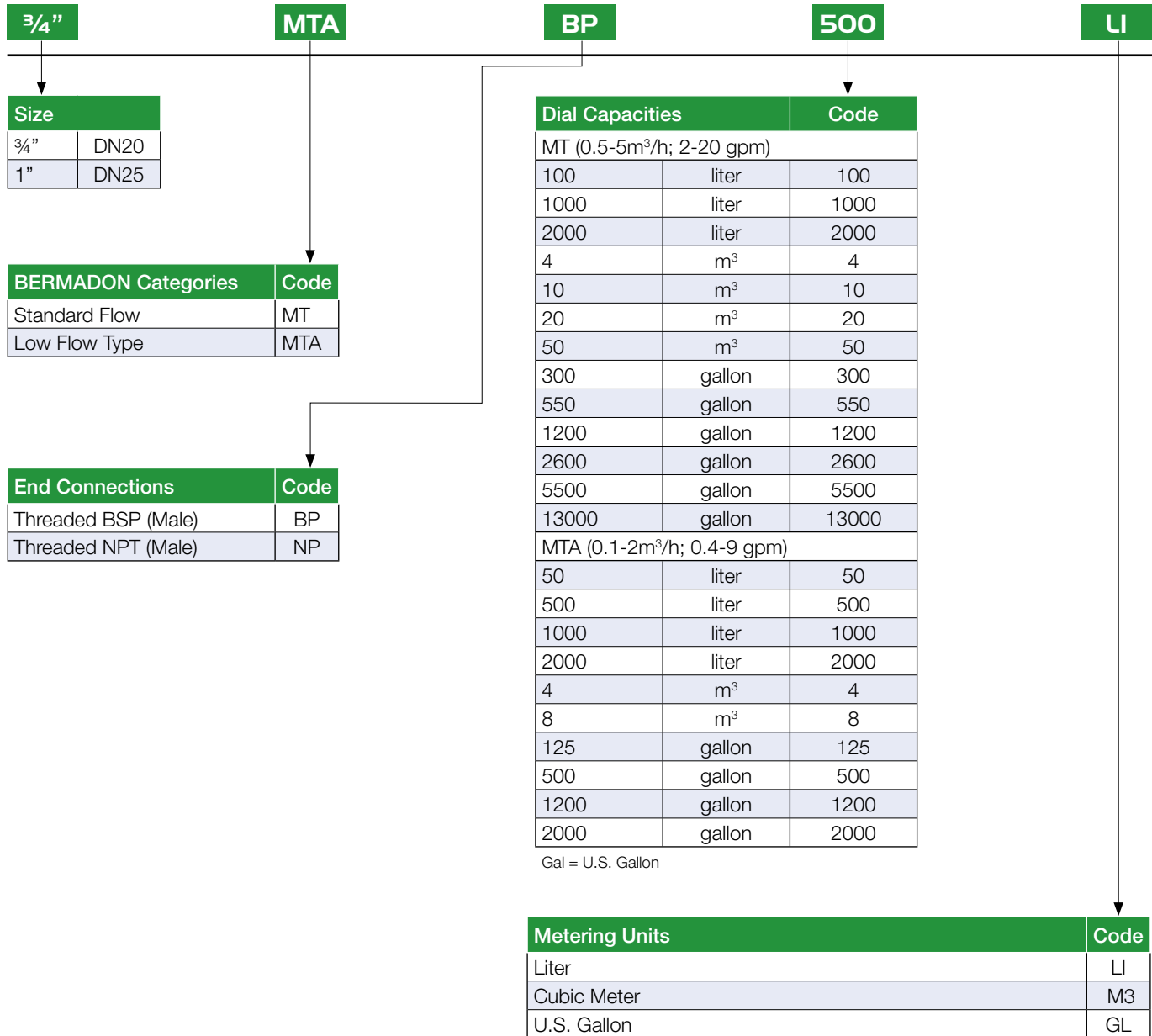


1" - 1½" Springs Selection Diagram & Pressure Range		
Spring	Pressure Range - bar	Pressure Range - psi
A	0.3 - 0.8	4 - 12
B	0.5 - 1.2	7 - 18
C	1.0 - 2.0	14 - 29
D	1.5 - 3.5	22 - 51
Q	3.0 - 5.5	44 - 80



2" Springs Selection Diagram & Pressure Range		
Spring	Pressure Range - bar	Pressure Range - psi
A	10 - 25	14.5 - 36
B	2.0 - 2.6	29 - 38
C	3.8 - 4.6	55 - 67
D	5.8 - 6.6	84 - 96







S	400	3W	24	AC-D	NC	BB																																												
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Solenoid Pilot Valves Manifold

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BERMAD Irrigation



Mini-Pilots/Pilots

Mini-Pilots/Pilots

Plastic Mini-Pilots (For IR PN10 Valves, Size Range 1.5" - 4")	Code	Standard Spring
3-Way Multi-Purpose Mini Pilot - Plastic	PC-X-A-P	H
3-Way Differential Mini Pilot - Plastic	PC-XD-A-P	J
2-Way Pressure Reducing Mini Pilot - Plastic	PC-20-A-P	H
2-Way Differential Pressure Reducing Mini Pilot - Plastic	PC-2D-A-P	J
2-Way Pressure Sustaining Mini Pilot - Plastic	PC-30-A-P	H
2-Way Pressure Relief (Quick Type) Mini Pilot - Plastic	PC-3Q-A-P	H
2/3-Way Mini Pilot "Servo" - Plastic	PC-S-A-P	K
2/3-Way Differential Pressure Sensing/Flow Mini Pilot "Servo" - Plastic	PC-SD-A-P	J
Flow Pilot (Paddle Type) - Plastic	PC-70-P	



Plastic Mini-Pilot - Spring Table		
Spring	Pressure Range	
	bar	psi
H - Orange	1-7	15-100
N - Natural (S.S)	0.8-6.5	11-95
K - Gray	0.5-3	7-40
J - Green	0.2-1.7	3-25

Metal Mini-Pilots (For IR PN16 Valves, Size Range 1.5" - 4")	Code	Standard Spring
3-Way Multi-Purpose Mini Pilot - Metal	PC-X-A-M	G
3-Way Differential Mini Pilot - Metal	PC-XD-A-M	J
2-Way Pressure Reducing Mini Pilot - Metal	PC-20-A-M	G
2-Way Differential Pressure Reducing Mini Pilot - Metal	PC-2D-A-M	J
2-Way Pressure Sustaining Mini Pilot - Metal	PC-30-A-M	G
2-Way Differential Pressure Sustaining Mini Pilot - Metal	PC-3D-A-M	K
2-Way Pressure Relief (Quick Type) Mini Pilot - Metal	PC-3Q-A-M	G
2/3-Way Mini Pilot "Servo" - Metal	PC-S-A-M	K
2/3-Way Differential Pressure Sensing/Flow Mini Pilot "Servo" - Metal	PC-SD-A-M	J
Flow Pilot (Paddle Type) - Metal, Size Range 1.5"-10"	PC-70-M	



Metal Mini-Pilot - Spring Table		
Spring	Pressure Range	
	bar	psi
M - Brown	1-16	15-230
G - Blue	1-10/12	15-145/175
H - Orange	1-7	15-100
N - Natural (S.S)	0.8-6.5	11-95
K - Gray	0.5-3	7-40
J - Green	0.2-1.7	3-25

Metal # Pilots (For IR PN16 Valves, Size Range 6" - 16")	Code	Standard Spring
2-Way Pressure Reducing Pilot - Brass	#2	16
2-Way Pressure Sustaining Pilot - Brass	#3	16
2-Way Differential Pressure Sensing/Flow Pilot - Brass	#2D	10
3-Way Positioning, Multi-Purpose Pilot - Brass	#X	16
3-Way Positioning, Differential Multi-Purpose Pilot - Brass	#XD	10
2-Way Pressure Sustaining/Relief Pilot - Brass	#3HC-R	16



Metal # Pilots - Spring Table		
Spring	Pressure Range	
	bar	psi
16 (Blue)	1-16	15-230
10 (Natural)	0.8-10	11-150
16*	2-30	30-430
16*	2-45	30-650

When ordering Pilots, add Description to Code * with high pressure setting kit



AMV - (900-D Series) Shut-Off Pilots	Code
AMV Shut-Off Pilot	3W-SOP
AMV Sequential 5-Way Shut-Off Pilot	5W-SSOP
AMV Shut-Off Pilot with Pump Shut-Off Electrical Switch	3W-SOP-S

When ordering Pilots, add Description to Code

Plastic Float (For IR PN10 Valves, Size Range 1.5" - 4")	Code
Modulating Horizontal Float Assembly - Plastic	#60P

Metal Float (For IR PN16 Valves, Size Range 1.5" - 16")	Code
Modulating Horizontal Float Assembly - Metal	#60M
Electric Float Switch	#65
4-Way Bi-Level Vertical Float Assembly	#66
Modulating 2-Way Vertical Float Assembly	#67

Plastic Accessories - K (For IR PN10 Valves, Size Range 1.5" - 4")	Item#	Code
Plastic Hydraulic Relay Valve (HRV) 2-Way 1/8"	5008651100	50-P
Plastic Hydraulic Relay Valve, 3-Way (3W-HRV) 1/8"		54-PZ
Plastic Shuttle Valve 8 x 1/8" x 8	1408600800	50-X-P
Black Plastic In-Line Filter (old) 1/4" x 1/8"	9004033000	
Grey Plastic In-Line Filter 1/4" x 1/8"	9004080700	-
Grey Plastic In-Line Filter 1/4" x 1/8" Short	900408S600	-
Plastic One-Way Flow Control 1/8"	1408782500	-
Plastic Check Valve 8mm	1408782000	20-P
Drain & Anti-Freeze Valve 1/4"	9004060000	f
Drain & Anti-Freeze Valve 3/8"	9038060000	
Drain & Anti-Freeze Valve 1/2"	9002060000	
Gauge Test-Point	3604040600	5

Metal Accessories - R (For IR PN16 Valves)	Code
Metal Hydraulic Relay Valve (HRV) 2-Way 3/8"	50-M
Metal Hydraulic Relay Valve 3-Way (3W-HRV) 3/8"	54-M
Metal Shuttle Valve 1/4" / 1/8"	50-X-M
Manual Selector, 3-Positions 4-Way, 1/8"	Z-SY3
Manual Selector, 3-Positions 4-Way, 1/4"	Z-SY6
Metal In-Line Filter, S.S 316 Body 1/4" / 3/8" / 1/2"	C
"Y" Strainer Control Filter, 1/4" / 3/8" / 1/2" NPT Brass, 500 Micron	Y
Large Control Filter	F
Metal Needle Valve 1/4"	-
Metal One-Way Flow Control 1/4" / 3/8" / 1/2"	-
Metal Check Valve 1/4" / 3/8" / 1/2"	20-M
2-Way Ball Valve 1/4" / 3/8" / 1/2"	-
3-Way Ball Valve 1/4" / 3/8" / 1/2"	-
Manometer Ball Valve 1/8" / 1/4" / 3/8"	-
Pressure Gauge 0-6, 10, 16 & 25 bar (90, 140, 230 & 350 psi), Side Port 1/4"	6
Pressure Gauge 0-6, 10, 16 & 25 bar (90, 140, 230 & 350 psi) Back Port 1/4"	6
Needle for Manometer & Test-Point	-

When ordering Accessories, add Description to Code

End Connection Adapters for 100 Series		Item #
Flange Adapters	3"-3"L-IR (100-Y-P-FF), BLACK POLYAMID FLANGE ASSY.- KIT	113L060091-KIT
	4"-4"R-IR (100-Y-P-FF), BLACK POLYAMID FLANGE ASSY.- KIT	1140060091-KIT
	6"-IR (100-Y-P-BOXER), BLACK POLYAMID FLANGE ASSY.-KIT	1160060091-KIT
	3"-3"L-IR (100-Y-P-CC-PK), DUCTILE IRON, "CORONA" FLANGE ASSY.-KIT, COATED BLACK POLYESTER	113L0P0091-KIT
	4"-4"R-IR (100-Y-CC-PK), DUCTILE IRON, "CORONA" FLANGE ASSY.-KIT, COATED BLACK POLYESTER	11400P0091-KIT
PVC Cemented (glue-in) Adapters	3"-3"L (100 SERIES), PVC ADAPTER BSP MTH 3" X ID 75 MM - KIT	11300PV075 - KIT
	3"-3"L (100 SERIES), PVC ADAPTER NPT MTH 3" X ID 2 1/2" - KIT	11300PV025 - KIT
	3"-3"L (100 SERIES), PVC ADAPTER ID 90 MM / OD 110 MM - KIT	11300PV110 - KIT
	3"-3"L (100 SERIES), PVC ADAPTER ID 110 MM / OD 125 MM - KIT	11300PV125 - KIT
	3"-3"L (100 SERIES), PVC ADAPTER ID 3" / OD 4" - KIT	11300PV175 - KIT
	3"-3"L (100 SERIES), PVC ADAPTER ID 4" - KIT	11300PV100 - KIT
Victaulic (Grooved) Adapters	3"-3"L (100 SERIES), BLACK PA6 GROOVE ADAPTER 3" - KIT	113006V075 - KIT
	3"-3"L (100 SERIES), BLACK PA6 GROOVE ADAPTER 4" - KIT	113006V100 - KIT
PVC Horn Adapter	3" (100-HORN) PVC ADAPTOR FOR HORN LAYFLAT PIPE	1130PVCH60




	Description	Model Code	Item #
	Tube Straight Connector 8mm - 8mm	FT 88	3656005600
	Straight Connector 1/8"-8mm	FT 18	3608025600
	Straight Connector 1/4"-8mm	FT 78	3604025600
	Elbow Connector 1/8"-8mm	FT 28	3608015600
	Elbow Connector 1/4"-8mm	FT 58	3604015600
	1/8" NPT Male Plug	FT 38	3608070000
	1/4" NPT Male Plug	FT 34	3604070000
	3/8" NPT Male Plug	FT 32	3638070200
	1/2" BSPT Male Plug	FT 30	3602070000
	Bushing Male-Female 1/8" -1/8"	FT 11	3608050805
	Bushing Male-Female 1/4"-1/8"	FT 48	3604050805
	T-Connector For Tube 8mm-8mm-8mm	FT 98	360807T600
	T-Connector For Tube 8mm-1/8"-8mm	FT 98/1	360807B600
	T-Connector For Tube 8mm-8mm -1/8"	FT 98/2	360807R600
	Coupler For 8mm Tube 1/8"-8mm	FT 08	3608025602
	8mm Plastic Command Tube (Meter)	PP08	0756012000


Irrigation Ordering Guide

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Water Control Solutions


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