



**Watts FluidAir**  
Parker Hannifin Corporation  
Pneumatic Division  
Kittery, Maine 03904

FRL-COM-300

"35, 75, 105" Series  
Competitive Comparison

ISSUED: July, 2003

Supersedes: None

# 35, 75, 105 SERIES AIR PREPARATION UNITS COMPETITIVE COMPARISON



SPECIFICATION  
GENERALWATTS  
QUBE 35

NORGREN 72

SMC 2000

ARO  
1000SERIESNUMATICS  
10 SERIESNUMATICS  
12 SERIES

"35" Series Competitive Comparison

## FILTER

## Element Material

Adsorber Particulate	Sintered Plastic	Not Available Sintered Polypropylene	Plastic	Not Available Porous Polypropylene	Sintered Plastic	Sintered Plastic
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## Element Rating

Option 1 - Standard (Microns)	5	40	5	20	5	5
Option 2 (Microns)	20	5	Not Available	5	20	Not Available
Option 3 (Microns)	Not Available	25	Not Available	Not Available	Not Available	Not Available
Option 4 (Microns)	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

## Flow @ 100 PSIG, 5 PSID, 5 microns \*\*

1/8 inch port (SCFM)	32	Not Available	30	34	32	25
1/4 inch port (SCFM)	38	50	30	34	38	30
3/8 inch port (SCFM)	Not Available	50	Not Available	Not Available	Not Available	Not Available

## Seals

Viton		Available	Not Available	Not Available		
Nitrile	Standard	Standard	Standard	Standard	Standard	Standard

## Sump Capacity (oz)

Weight - Standard Unit (lb)	0.70	1.08	0.42	1.48	0.70	0.24
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## COALESCING FILTER

Differential Pressure Indicator	Not Available	Standard	Not Available	Not Available	Not Available	
Element Material		Syn Fiber & Polyurethane				Borosilicate Glass

## Element Rating

Option 1 - Standard (Microns)	0.3	0.01	0.01	0.01	0.3	0.7
Option 2 (Microns)	Not Available	Not Available	0.03	Not Available	Not Available	0.3
Option 3 (Microns)	Not Available	Not Available	Not Available	Not Available	Not Available	0.1

## Flow @ 100 PSIG, 5 PSID, Option 1 \*\*

1/8 inch port (SCFM)	11 @ 1.5 PSID	Not Available	7 @ 1.5PSID	22	11 @ 1.5 PSID	15 @ 1.5 PSID
1/4 inch port (SCFM)	11 @ 1.5 PSID	20	7 @ 1.5PSID	22	11 @ 1.5 PSID	15 @ 1.5 PSID
3/8 inch port (SCFM)	Not Available	20	Not Available	Not Available	Not Available	Not Available

## Seals

Nitrile	Nitrile	Nitrile / Viton	Nitrile	Nitrile	Nitrile	Fluorocarbon
Sump Capacity (oz)		0.90		0.60		0.40
Weight - Standard Unit (lb)	0.70	0.88	0.42	1.48	0.70	0.24

## FILTER/REGULATOR

## Flow @ 100 PSIG in, 90 PSIG out, 10 PSID \*\*

1/8 inch port (SCFM)	32	Not Available		5	32	10 @ 80PSI set, 20PSID
1/4 inch port (SCFM)	40	35	14	5	40	10 @ 80PSI set, 20PSID
3/8 inch port (SCFM)	Not Available	35		Not Available	Not Available	Not Available

## Weight - Standard Unit (lb)

	0.78	1.15	0.79	2.05	0.78	0.34
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Note: For other specifications, see individual filter or regulator.

\*\* All flows per catalog data

FRL-COM-300

**SPECIFICATION GENERAL**

**WATTS  
QUBE 35**

**NORGREN 72**

**SMC 2000**

**ARO  
1000SERIES**

**NUMATICS  
10 SERIES**

**NUMATICS  
12 SERIES**

**REGULATOR**

<b>Adjustment Control Mechanism – Knob T-Bar</b>	Available Not Available	Non-rising, Locking Available	Non-rising, Locking Not Available	Non-rising, Locking Not Available	Available Not Available	Locking Not Available
<b>Air Pilot Option</b>	Available	Not Available	Not Available	Not Available	Available	Not Available
<b>Diaphragm Material</b>	Not Available	Nitrile / Viton	Nitrile	Nitrile	Not Available	Nitrile
<b>Flow @ 100 PSIG in, 90 PSIG out, 10 PSID **</b>						
<b>1/8 inch port (SCFM)</b>	35	Not Available		10	35	10 @ 80PSI set, 20PSID
<b>1/4 inch port (SCFM)</b>	45	35	14	10	45	10 @ 80PSI set, 20PSID
<b>3/8 inch port (SCFM)</b>	Not Available	35		Not Available	Not Available	Not Available
<b>Gauge Ports (in) (number)</b>		1/8 (2)	1/8 (2)	1/8 (2)		
<b>Non-relieving</b>	Available	Available	Available	Available	Available	Available
<b>Panel Mount Nut – Metal Plastic</b>		Not Available Available	Available	Available Not Available		Not Available Available
<b>Relieving Regulator Type</b>	Standard Piston	Standard Diaphragm	Standard Diaphragm	Standard Diaphragm	Standard Piston	Standard Diaphragm
<b>Reverse Flow Capability</b>	Not Available	Available	Available	Not Available	Not Available	Not Available
<b>Seals – Viton Nitrile</b>	Standard	Available Standard	Not Available Standard	Not Available Standard	Standard	Standard
<b>Spring Ranges – Option 1</b>			30	15		25
<b>Option 2</b>	60	5-60	60	50	60	60
<b>Option 3 (Standard)</b>		5-150	120	125		125
<b>Option 4</b>	160	Not Available	Not Available	Not Available	160	200
<b>Tamperproof Option</b>	Available	Available	Available	Not Available	Available	Available
<b>Weight - Standard Unit (lb)</b>	0.82	0.79	0.60	1.38	0.82	0.82

**LUBRICATOR**

<b>Flow @ 100 PSIG, 5 PSID **</b>						
<b>1/8 inch port (SCFM)</b>	40	Not Available	40	41	40	20
<b>1/4 inch port (SCFM)</b>	50	36	40	60	50	35
<b>3/8 inch port (SCFM)</b>	Not Available	36	Not Available	Not Available	Not Available	Not Available
<b>Lubricator Type – Micro-Mist Mist</b>	Not Available Available	Available Available	Not Available Available	Available Not Available	Not Available Available	Available Not Available
<b>Minimum Flow for Lubrication</b>						
<b>Micro-Mist (SCFM)</b>	Not Available	2.0	Not Available		Not Available	2.0
<b>Mist (SCFM)</b>		1.0	0.53			Not Available
<b>Oil Capacity – Micro-Mist (oz)</b>		2.0	Not Available	1.10		
<b>Mist (oz)</b>		2.0	0.85	Not Available		
<b>Pressure Fill Option</b>		Available	Not Available	Not Available		Available
<b>Seals – Viton Nitrile</b>	Standard	Available Standard	Not Available Standard	Not Available Standard	Standard	
<b>Sight Dome Material</b>		Transparent Nylon	Polycarbonate	Nylon		Polycarbonate
<b>Tamperproof Option</b>	Available	Available	Not Available	Available	Available	Standard
<b>Weight - Standard Unit (lb)</b>	0.70	1.08	0.49	1.50	0.70	0.30

\*\* All flows per catalog data

# 35 Series

## SPECIFICATION

GENERAL	WATTS QUBE 35	NORGREN 72	SMC 2000	ARO 1000 SERIES	NUMATICS 10 SERIES	NUMATICS 12 SERIES
<b>Basic Body Size</b>	1/8	1/4	1/8	1/8	1/8	1/8
<b>Body Color</b>	Black	Black	Silver	Black	Black	Gray
<b>Body Material</b>	Zinc	Zinc	Zinc	Glass Reinforced Composite	Zinc	Aluminum
<b>Bowl Attachment Mechanism</b>	Bayonet	Bayonet	Bayonet	Bayonet	Bayonet	Threaded
<b>Bowl Capacity (oz)</b>	1.5	2.2	0.85	1.10	1.5	1.5
<b>Bowl Guard</b>	Standard	Available	Standard	Standard	Standard	Standard
<b>Bowl Guard Materials</b>						
Metal		Zinc	Available	Not Available		Zinc
Plastic	Available		Not Available	Composite	Available	Polycarbonate
<b>Bowl Materials</b>						
Metal	Zinc	Zinc		Not Available	Zinc	Zinc
Plastic	Chemically Resistant Polyurethane	Polycarbonate	Polycarbonate	Polycarbonate	Chemically Resistant Polyurethane	Polycarbonate
<b>Drain Types</b>						
Automatic	Available	Available	Available	Available	Available	Not Available
Manual Push		Not Available	Available	Available		
Manual Twist	Available	Standard	Standard	Not Available	Available	Standard
<b>Gauge Included Option</b>	Available	Standard	Available	Available	Available	Available
<b>Gauge Units</b>	PSI/bar	PSI/bar	PSI/bar	PSI/bar	PSI/bar	PSI/bar
<b>Inline Porting</b>	Available	Available	Available	Available	Available	Available
<b>Manufacturing Location</b>	Kittery, ME	Littleton, CO	Indianapolis, IN	Bryan, OH	Highland, MI	Highland, MI
<b>Modular Assembly</b>	Available	Available	Available	Available	Available	Available
<b>Port Sizes (in)</b>	1/8, 1/4	1/4, 3/8	1/8, 1/4	1/8, 1/4	1/8, 1/4	1/8, 1/4, 3/8
<b>Port to Port Dimensions</b>						
Single Unit (in)	1.59	1.98	1.57	2.00	1.59	1.50
Two Units In-line (in)						Not Available
Two Units Modular (in)	3.19	4.22	3.54	4.00	3.19	3.00
Three Units In-line (in)						Not Available
Three Units Modular (in)	4.78	6.46	5.51	6.00	4.78	4.50
<b>Rated Pressure - Maximum</b>						
Metal Bowl (PSIG)	250	250		Not Available	250	250
Plastic Bowl (PSIG)	150	150	150	150	150	150
Regulator (PSIG)		300	150	250		200
<b>Rated Temperature - Maximum</b>						
Metal Bowl (°F)	150	150		Not Available	150	120
Plastic Bowl (°F)	120	125	140	125	120	120
Regulator (°F)		150	140	125		120
<b>Sight Gauge Material - Metal Bowl</b>	Chemically Resistant Polyurethane	Transparent Nylon		Not Available	Chemically Resistant Polyurethane	Polycarbonate
<b>Thread Types</b>		PTF, BSPP	NPT, PF, Rc	NPT, BSPP		NPTF, PT, GTAP
<b>Wall Mounting Brackets Styles</b>	L	C	T, L	T	L	L
<b>Warranty (Months)</b>	18	24	18	24	18	12
<b>Warranty Extension</b>	Not Available	Not Available		Not Available	Not Available	Not Available

**SPECIFICATION**

	<b>WATTS 75 SERIES</b>	<b>NORGREN 72 SERIES</b>	<b>NORGREN 73 SERIES</b>	<b>SMC NAF3000 / NAF4000</b>	<b>ARO 2000 SERIES</b>	<b>ARROW TRI STAR</b>	<b>MASTER PNEUMATIC * GUARDSMAN MODULAR</b>	<b>NUMATICS 21 SERIES</b>	<b>NUMATICS 22 SERIES</b>
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**FILTER**

<b>Element Material</b>									
- Adsorber	Not Available	Not Available	Not Available	Not Available	Not Available	Activated Carbon	Not Available	Activated Carbon	Activated Carbon
- Particulate	Polypropylene	Sintered Polypropylene	Sintered Plastic	Sintered Bronze	Porous Polypropylene	Sintered Bronze	Sintered Bronze	Sintered Plastic	Sintered Plastic
<b>Element Rating</b>									
- Option 1 - Standard (Microns)	40	40	5	5	5	40	5	5	5
- Option 2 (Microns)	5	5	25	2	40	5	20	40	N/A
- Option 3 (Microns)	N/A	25	40	10	N/A	20	40	N/A	N/A
- Option 4 (Microns)	N/A	N/A	N/A	20, 40, 70, & 100	N/A	90	N/A	N/A	N/A
<b>Flow @ 90 PSIG, 5 PSID, 5 Microns **</b>									
- 1/4 Inch Port (SCFM)	47	50		42	48	46	43	30	45
- 3/8 Inch Port (SCFM)	64	50	60	42 / 105	100	73	58	45	60
- 1/2 Inch Port (SCFM)	64			105	122	92	78	45	70
<b>Seals</b>									
- Fluorocarbon	Not Available	Available	Available	Not Available	Optional	Not Available	Not Available	Not Available	Not Available
- Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Sump Capacity (oz)</b>	1.45			0.68 / 1.35	2.87	1.80	3.00		
<b>Water Separator Option</b>	Not Available		Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
<b>Weight - Standard Unit (lb)</b>	1.25	1.08	1.1	0.64 / 1.19	1.46	1.20	1.13	1.17	0.5

**COALESCING FILTER**

<b>Differential Pressure Indicator</b>	Not Available	Standard	Standard	Not Available	Optional	Not Available	Not Available	Standard	Standard
<b>Element Material</b>	Borosilicate	Sintered Fiber & Polyurethane Foam	Sintered Fiber & Polyurethane Foam	Borosilicate	Borosilicate	Borosilicate	Not Available	Borosilicate	Borosilicate
<b>Element Rating</b>									
- Option 1 - Standard (Microns)	0.30	0.01	0.01	0.30	0.30	0.03	Not Available	0.3	0.30
- Option 2 (Microns)	N/A	Not Available	Not Available	0.01	N/A	0.01	Not Available	0.1	0.10
<b>Flow @ 100 PSIG, 1 PSID, Option 1 **</b>									
- 1/4 Inch Port (SCFM)	12	20		11	16	12	Not Available	16	15
- 3/8 Inch Port (SCFM)	12	20	10	11 / 25	16	24	Not Available	16	15
- 1/2 Inch Port (SCFM)	12			25	23	30	Not Available	16	15
<b>Seals</b>	See Filter	Nitrile/Viton	See Filter	See Filter	See Filter	See Filter	Not Available	See Filter	See Filter
<b>Sump Capacity (oz)</b>	1.45	0.90		0.68 / 1.35	2.87	1.80	3.00		
<b>Weight - Standard Unit (lb)</b>	1.25	0.88	1.2	0.64 / 1.19	1.46	1.00	Not Available	1.17	0.63

**FILTER/REGULATOR**

<b>Flow @ 100 PSIG In, 90 PSIG Out, 10 PSID **</b>									
- 1/4 Inch Port (SCFM)	42	35		17	30	50	67	35	40
- 3/8 Inch Port (SCFM)	62	35	45	17 / 75	30	80	90	35	40
- 1/2 Inch Port (SCFM)	62			75	35	80	90	35	40
<b>Weight - Standard Unit (lb)</b>	1.50	1.15	1.5	1.23 / 2.54	2.03	1.75	1.44	1.7	0.59

Note: For other specifications see individual filter or regulator.

\* Also sold under Ross    \*\* All flows per catalog data

## SPECIFICATION

	WATTS 75 SERIES	NORGREN 72 SERIES	NORGREN 73 SERIES	SMC NAF3000 / NAF4000	ARO 2000 SERIES	ARROW TRI STAR	MASTER PNEUMATIC * GUARDSMAN MODULAR	NUMATICS 21 SERIES	NUMATICS 22 SERIES
<b>REGULATOR</b>									
<b>Adjustment Control Mechanism</b>									
– Knob	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking
– T-Bar	Not Available	Available	Available	Not Available	Not Available	Yes	Not Available	Not Available	Not Available
<b>Air Pilot Option</b>	Not Available	Not Available	Not Available	No	No	No	Yes	Not Available	Not Available
<b>Diaphragm Material</b>	Nitrile	Nitrile / Viton	Nitrile	Nitrile	Nitrile, Viton (Opt)	Nitrile	N/A	Nitrile	Nitrile
<b>Flow @ 100 PSIG In, 90 PSIG Out, 10 PSID **</b>									
– 1/4 Inch Port (SCFM)	32	35		50	24	50	67	45	30
– 3/8 Inch Port (SCFM)	32	35	40	50 / 105	20	80	90	45	30
– 1/2 Inch Port (SCFM)	32			105	30	80	90	45	30
<b>Gauge Ports (in) (number)</b>	1/4 (2)	1/8 (2)	1/4 (2)	1/8 (2) / 1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)
<b>Non-relieving</b>	Optional	Available	Optional	Optional	Yes	Yes	Optional	Optional	Optional
<b>Panel Mount Nut - Metal</b>	Yes	Not Available	Yes	Yes	Yes	Yes	Yes		Not Available
– Plastic	Not Available	Available	Yes	Not Available	Yes	Yes	Not Available		Available
<b>Relieving Regulator Type</b>	Standard Diaphragm	Standard Diaphragm	Standard Diaphragm	Standard Diaphragm	Yes Diaphragm	Yes Diaphragm	Standard Piston	Standard Diaphragm	Standard Diaphragm
<b>Reverse Flow Capability</b>	Not Available	Available	Available	Not Available	Not Available	Not Available	Not Available	Yes - By Pass Check	Yes - By Pass Check
<b>Seals - Fluorocarbon</b>	Not Available	Available	Available	Not Available	Optional	Not Available	Not Available	Not Available	Not Available
– Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Spring Ranges - Option 1</b>	0-25		5-60	7-30	0-50	0-50	0-50	0-25	0-25
– Option 2	0-60	5-60	5-150	7-60	5-125	0-125	0-100	0-60	0-60
– Option 3	0-125	5-150	10-250	7-125	N/A	0-250	0-160	0-125	0-125
<b>Tamperproof Option</b>	Not Available	Available	Yes	Not Available	Yes	Yes	Yes	Yes	Not Available
<b>Weight - Standard Unit (lb)</b>	1.35	0.79	1.1	0.90 / 1.85	1.34	1.50	1.00	1.37	1.37
<b>LUBRICATOR</b>									
<b>Automatic Fill</b>	Not Available		Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
<b>Fill Under Pressure - Mist Style</b>	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Flow @ 90 PSIG, 5 PSID **</b>									
– 1/4 Inch Port (SCFM)	18	36		80	27	14	32	20	40
– 3/8 Inch Port (SCFM)	60	36	90	80 / 230	45	80	70	57	70
– 1/2 Inch Port (SCFM)	60			230	48	138	90	57	100
<b>Lubricator Type – Micro Mist</b>	No	Available	Yes	No	Not Available	Yes	No	Not Available	Not Available
– Mist	Yes	Available	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Minimum Flow For Lubrication @ 100 PSIG</b>									
– Micro Mist (SCFM)	N/A	2.0	1.5	N/A	N/A	2.0	N/A	N/A	N/A
– Mist (SCFM)	3.0	2.0	1.5	1.06, 1.41 / 1.41, 1.77	4.0 to 5.0	2.0 to 0.3	2.0	2.0	2.0
<b>Oil Capacity – Micro Mist (oz)</b>	N/A	2.0	3.5	N/A	N/A	5.0	N/A	N/A	N/A
– Mist (oz)	3.8	2.0	3.5	2.0 / 6.0	6.0	5.0	4.0	3.8	3.8
<b>Pressure Fill Option</b>	Yes	Available	Yes	No	Yes	No	Yes	Yes	Yes
<b>Seals – Fluorocarbon</b>	Not Available	Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
– Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Sight Dome Material</b>	Isoplast	Transparent Nylon	Nylon	Polycarbonate	Polycarbonate	Polycarbonate	Polyamide		Polycarbonate
<b>Tamperproof Option</b>	Standard	Available	No	No	Yes	Yes	No	No	No
<b>Weight - Standard Unit (lb)</b>	1.25	1.08	1.1	0.66 / 1.23	1.44	1.00	1.03	1.17	0.34

\* Also sold under Ross

\*\* All flows per catalog data

<b>SPECIFICATION GENERAL</b>	<b>WATTS 75 SERIES</b>	<b>NORGREN 72 SERIES</b>	<b>NORGREN 73 SERIES</b>	<b>SMC NAF3000 / NAF4000</b>	<b>ARO 2000 SERIES</b>	<b>ARROW TRI STAR</b>	<b>MASTER PNEUMATIC * GUARDSMAN MODULAR</b>	<b>NUMATICS 21 SERIES</b>	<b>NUMATICS 22 SERIES</b>
<b>Basic Body Size (in)</b>	3/8	1/4	3/8	1/4 / 1/2	3/8	3/8	3/8	3/8	1/4, 3/8, 1/2
<b>Body Color</b>	Black	Black	Black	Platinum Silver	Black	Gray	Black	Green	Grey
<b>Body Material</b>	Zinc	Zinc	Zinc	Aluminum	Zinc	Aluminum	Zinc	Zinc	Aluminum
<b>Bowl Attachment Mechanism</b>	Threaded	Bayonet	Bayonet	Latch	Bayonet	Threaded	Threaded Collar	Threaded	Bayonet
<b>Bowl Capacity (oz)</b>	3.8	2.2	3.5	2 / 6	6	5	4	3.8	3.8
<b>Bowl Guard</b>	Optional	Available	Optional	Mandatory	Mandatory	Mandatory	Mandatory	Optional	Standard
<b>Bowl Guard Materials</b>									
– Metal	Not Available	Zinc	Steel	Steel	Zinc	Steel	Steel	Plastic	Plastic
– Plastic	Isoplast™			N/A	Not Available	N/A	Not Available		
<b>Bowl Materials</b>									
– Metal	Zinc	Zinc	Zinc	Aluminum	Zinc	Aluminum	Zinc	Zinc	Zinc
– Plastic	N/A	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
<b>Drain Types</b>									
– Automatic	Optional	Available	Optional	Optional	Optional	Optional	Standard	Optional	Available
– Manual Push	Not Available	Not Available	Not Available	Standard	Standard	Standard w/ Plastic Bowls	Not Available	Not Available	Available
– Manual Twist	Standard	Standard	Standard	No	Optional	Standard w/ Metal Bowls	Optional	Standard	Standard
<b>Gauge Included Option</b>	Yes	Standard	Yes	Yes	Yes	Yes	Yes	Yes	Available
<b>Gauge Units</b>	PSI/bar	PSI/bar	PSI	PSI/kPa	PSI/bar	PSI/bar	PSI/bar	PSI/bar	PSI/bar
<b>Inline Porting</b>	Yes	Available	Yes	Yes	Yes	Yes	Yes	Yes	Available
<b>Manufacturing Location</b>	Kittery, ME, U.S.A.	Littleton, CO, U.S.A.	Littleton, CO, U.S.A.	Minato-Ku Tokyo, JAPAN	Bryan, OH, U.S.A.	Lake Zurich, IL, U.S.A.	Sterling Hts, MI, U.S.A.	Highland, MI, U.S.A.	Highland, MI, U.S.A.
<b>Modular Assembly</b>	Semi	Full	Full	Full	Full	Full	Full	Available	Available
<b>Port Sizes (in)</b>	1/4, 3/8, 1/2	1/4, 3/8	1/4, 3/8, 1/2	1/4, 3/8 / 3/8, 1/2	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2	1/4, 3/8, 1/2	1/4, 3/8, 1/2
<b>Port To Port Dimension</b>									
– Single Unit (in)	2.19	1.98	2.68	2.09 / 2.76	2.63	2.72	2.63	1.65	2.37
– Two Units In-Line (in)	4.38			4.61 / 6.06	5.75	5.81	5.91		Not Available
– Two Units Modular (in)	5.79	4.22		6.65 / 8.66	9.16	7.19	5.53	3.3	4.33
– Three Units In-Line (in)	6.56			7.13 / 9.37	8.75	8.88	9.19		Not Available
– Three Units Modular (in)	7.97	6.46	9.13	9.17 / 11.97	12.16	10.25	8.41	4.95	6.49
<b>Rated Pressure - Maximum</b>									
– Metal Bowl (PSIG)	300	250	250	150	150	250	200	300	250
– Plastic Bowl (PSIG)	150	150	150	150	150	150	150	150	150
– Regulator (PSIG)	300	300	300	150	150	300	250	300	200
<b>Rated Temperature - Maximum</b>									
– Metal Bowl (°F)	180	150	175	140	125	200	150	180	120
– Plastic Bowl (°F)	120	125	125	140	125	120	125	120	120
– Regulator (°F)	120	150	175	140	185	120	125	120	120
<b>Sight Gauge Material - Metal Bowl</b>	Polycarbonate	Transparent Nylon	Nylon	Polyamide	Polyamide	Polyetherimide Resin	Glass	Polycarbonate	Polycarbonate
<b>Thread Types</b>	NPT	PTF, BSPP	NPT, BSPP, BSPT	NPT, BSPT	NPT, BSPP	NPT	NPT, BSPP	NPT, BSPP, BSPT	NPTF, PT, GTAP
<b>Wall Mounting Brackets Styles</b>	L	C	L, T, U	L, T	L, T, U	L, T	C, L, T, U	L	L
<b>Warranty (Months)</b>	18	24	24	12	12	12	84		12
<b>Warranty Extension On Other Products (Same Brand Name)</b>	Not Available	Not Available		Not Available	Not Available	Not Available	Not Available		Not Available

\* Also sold under Ross

## SPECIFICATION

SPECIFICATION	WATTS 105 SERIES	NORGREN 74 SERIES	SMC NAF4000	ARO 2000 SERIES	ARROW TRI STAR	MASTER PNEUMATIC * VANGUARD MODULAR	NUMATICS 30 SERIES	NUMATICS 32 SERIES
<b>FILTER</b>								
Element Material								
– Adsorber	Not Available	Activated Carbon	Not Available	Not Available	Activated Carbon	Not Available	Not Available	Activated Carbon
– Particulate	Polypropylene	Sintered Plastic	Sintered Bronze	Porous Polypropylene	Sintered Bronze	Sintered Bronze	Polypropylene	Sintered Plastic
Element Rating								
– Option 1 - Standard (Microns)	40	5	5	40	40	5	40	5
– Option 2 (Microns)	5	25	2	5	5	20	5	N/A
– Option 3 (Microns)	N/A	40	10	20	20	40	N/A	N/A
– Option 4 (Microns)	N/A	N/A	20, 40, 70, & 100	N/A	90	N/A	N/A	N/A
Flow @ 90 PSIG, 5 PSID, 5 Microns **								
– 3/8 Inch Port (SCFM)	95		105	100	73	117	95	N/A
– 1/2 Inch Port (SCFM)	120	110	105	122	92	180	120	105
– 3/4 Inch Port (SCFM)	120		Not Available	Not Available	92	214	120	110
Seals – Fluorocarbon	Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
– Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Sump Capacity (oz)	4.00		1.35	2.87	1.80	2.70	4.00	
Water Separator Option	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Weight - Standard Unit (lb)	1.10	1.79	1.19	1.46	1.20	2.19	1.10	1.2

## COALESCING FILTER

Differential Pressure Indicator	Not Available	Standard	Not Available	Optional	Not Available	Optional	Not Available	Standard
Element Material	Borosilicate	Sintered Fiber & Polyurethane Foam	Borosilicate	Borosilicate	Borosilicate	Borosilicate	Borosilicate	Borosilicate
Element Rating								
– Option 1 - Standard (Microns)	0.30	0.01	0.30	0.30	0.03	0.30	0.30	0.30
– Option 2 (Microns)	N/A		0.01	N/A	0.01	N/A	N/A	0.10
Flow @ 100 PSIG, 1 PSID, Option 1 **								
– 3/8 Inch Port (SCFM)	25		25	16	24	20	25	Not Available
– 1/2 Inch Port (SCFM)	25	20	25	23	30	60	25	48
– 3/4 Inch Port (SCFM)	25		Not Available	Not Available	30	Not Available	25	48
Seals	See Filter	See Filter	See Filter	See Filter	See Filter	See Filter	See Filter	See Filter
Sump Capacity (oz)	4.00		1.35	2.87	1.80	2.70	4.00	
Weight - Standard Unit (lb)	1.10	1.84	1.19	1.46	1.00	2.13 / 3.25	1.10	1.47

## FILTER/REGULATOR

Flow @ 100 PSIG In, 90 PSIG Out, 10 PSID **								
– 3/8 Inch Port (SCFM)	90		75	30	80	111	90	Not Available
– 1/2 Inch Port (SCFM)	90	80	75	35	80	166	90	75
– 3/4 Inch Port (SCFM)	90		Not Available	35	80	193	90	75
Weight - Standard Unit (lb)	2.21	2.59	2.54	2.03	1.75	2.50	2.21	1.44

Note: For other specifications see individual filter or regulator.

\* Also sold under Ross    \*\* All flows per catalog data



SPECIFICATION	WATTS 105 SERIES	NORGREN 74 SERIES	SMC NAF4000	ARO 2000 SERIES	ARROW TRI STAR	MASTER PNEUMATIC * VANGUARD MODULAR	NUMATICS 30 SERIES	NUMATICS 32 SERIES
<b>REGULATOR</b>								
<b>Adjustment Control Mechanism</b>								
– Knob	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking	Non-rising Locking
– T-Bar	Not Available	Available	Not Available	Not Available	Yes	Optional	Not Available	Not Available
<b>Air Pilot Option</b>	Not Available	Not Available	No	No	No	Yes	Not Available	Not Available
<b>Diaphragm Material</b>	Nitrile	Nitrile	Nitrile	Nitrile, Viton (Opt)	Nitrile	Nitrile	Nitrile	Nitrile
<b>Flow @ 100 PSIG In, 90 PSIG Out, 10 PSID **</b>								
– 3/8 Inch Port (SCFM)	40		105	20	80	78	40	Not Available
– 1/2 Inch Port (SCFM)	40	75	105	30	80	150	40	70
– 3/4 Inch Port (SCFM)	40		Not Available	30	80	150	40	70
<b>Gauge Ports (in) (number)</b>	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)	1/4 (2)
<b>Non-relieving</b>	Optional	Optional	Optional	Yes	Yes	Optional	Optional	Optional
<b>Panel Mount Nut</b> – Metal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Not Available
– Plastic	Not Available	Not Available	Not Available	Yes	Yes	Not Available	Not Available	Available
<b>Relieving</b>	Standard	Standard	Standard	Yes	Yes	Standard	Standard	Standard
<b>Regulator Type</b>	Diaphragm	Diaphragm	Diaphragm	Diaphragm	Diaphragm	Diaphragm	Diaphragm	Diaphragm or Piston
<b>Reverse Flow Capability</b>	Not Available	Available	Yes - By Pass Check	Not Available	Not Available	Not Available	Not Available	Yes - By Pass Check
<b>Seals</b> – Fluorocarbon	Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
– Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Spring Ranges</b> – Option 1	0-25	5-60	7-30	0-50	0-50	0-50	0-25	0-60
– Option 2	0-60	5-150	7-60	5-125	0-125	0-125	0-60	0-125
– Option 3	0-125	10-250	7-125	N/A	0-250	0-175	0-125	0-200
<b>Tamperproof Option</b>	Not Available	Yes	Not Available	Yes	Yes	Yes	Not Available	Not Available
<b>Weight - Standard Unit (lb)</b>	1.64	1.77	1.85	1.34	1.50	2.06	1.64	1.64
<b>LUBRICATOR</b>								
<b>Automatic Fill</b> Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
<b>Fill Under Pressure - Mist Style</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Flow @ 90 PSIG, 5 PSID **</b>								
– 3/8 Inch Port (SCFM)	58		230	45	80	76	58	Not Available
– 1/2 Inch Port (SCFM)	145	100	230	48	138	111	145	110
– 3/4 Inch Port (SCFM)	145		Not Available	48	138	152	145	150
<b>Lubricator Type</b> – Micro Mist	No	Yes	No	Not Available	Yes	No	No	Not Available
– Mist	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Minimum Flow For Lubrication @ 100 PSIG</b>								
– Micro Mist (SCFM)	N/A	1.5	N/A	N/A	2.0	N/A	N/A	N/A
– Mist (SCFM)	3.0	1.5	1.41, 1.77	4.0 to 5.0	2.0 to 0.3	2.0	3.0	2.0
<b>Oil Capacity</b>								
– Micro Mist (oz)	N/A	7.0	N/A	N/A	5.0	N/A	N/A	N/A
– Mist (oz)	8.5	7.0	6.0	6.0	5.0	8.0	8.5	8.5
<b>Pressure Fill Option</b>	Yes	Yes	No	Yes	No	Yes	Yes	Yes
<b>Seals</b> – Fluorocarbon	Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
– Nitrile	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
<b>Sight Dome Material</b>	Isoplast	Nylon	Polycarbonate	Polycarbonate	Polycarbonate	Polyamide	Isoplast	Polycarbonate
<b>Tamperproof Option</b>	Standard	No	No	Yes	Yes	No	Standard	No
<b>Weight - Standard Unit (lb)</b>	1.09	1.61	1.23	1.44	1.00	2.06	1.09	1.0

\* Also sold under Ross    \*\* All flows per catalog data

## SPECIFICATION

## GENERAL

	WATTS 105 SERIES	NORGREN 74 SERIES	SMC NAF4000	ARO 2000 SERIES	ARROW TRI STAR	MASTER PNEUMATIC * VANGUARD MODULAR	NUMATICS 30 SERIES	NUMATICS 32 SERIES
<b>Basic Body Size (in)</b>	1/2	1/2	1/2	3/8	3/8	1/2	1/2	1/2
<b>Body Color</b>	Black	Black	Platinum Silver	Black	Gray	Black	Black	Gray
<b>Body Material</b>	Aluminum	Zinc	Aluminum	Zinc	Aluminum	Zinc	Aluminum	Aluminum
<b>Bowl Attachment Mechanism</b>	Threaded	Bayonet	Bayonet	Bayonet	Threaded	Threaded Collar	Threaded	Bayonet
<b>Bowl Capacity (oz)</b>	8.5	7	6	6.0	5	8	8.5	8.5
<b>Bowl Guard</b>	Optional	Optional	Standard	Standard	Standard	Standard	Optional	Standard
<b>Bowl Guard Materials – Metal</b>	Not Available	Zinc	Steel	Zinc	Steel	Steel	Not Available	Not Available
<b>– Plastic</b>	Polyethelene	Not Available	N/A	Not Available	N/A	Not Available	Polyethelene	Plastic
<b>Bowl Materials – Metal</b>	Zinc	Zinc	Aluminum	Zinc	Aluminum	Zinc	Zinc	Zinc
<b>– Plastic</b>	Chemically Resistant Polyurethane	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Chemically Resistant Polyurethane	Polycarbonate
<b>Drain Types</b>								
<b>– Automatic</b>	Optional	Optional	Optional	Optional	Optional	Standard	Optional	Optional
<b>– Manual Push</b>	Not Available	Not Available	Standard	Standard	Standard w/ Plastic Bowls	Not Available	Not Available	Optional
<b>– Manual Twist</b>	Standard	Standard	No	Not Available	Standard w/ Metal Bowls	Optional	Standard	Standard
<b>Gauge Included Option</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Gauge Units</b>	PSI/bar	PSI	PSI/kPa	PSI/bar	PSI/bar	PSI/bar	PSI/bar	PSI/bar
<b>Inline Porting</b>	Yes, 1/4, 3/8 & 1/2 Only	Yes	Yes	Yes	Yes	Yes	Yes, 1/4, 3/8 & 1/2 Only	Yes
<b>Manufacturing Location</b>	Kittery, ME, U.S.A.	Littleton, CO, U.S.A.	Minato-Ku Tokyo, JAPAN	Bryan, OH, U.S.A.	Lake Zurich, IL, U.S.A.	Sterling Hts, MI, U.S.A.	Highland, MI, U.S.A.	Highland, MI, U.S.A.
<b>Modular Assembly</b>	Semi	Full	Full	Full	Full	Full	Semi	Semi
<b>Port Sizes (in)</b>	1/4, 3/8, 1/2, 3/4	3/8, 1/2, 3/4	3/8, 1/2	1/4, 3/8, 1/2	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4	1/4, 3/8, 1/2, 3/4	1/2, 3/4
<b>Port To Port Dimension</b>								
<b>– Single Unit (in)</b>	2.69	3.15	2.76	2.60	2.72	3.50	2.69	3.00
<b>– Two Units In-Line (in)</b>	5.38, 6.06 (3/4)		6.06	6.00	5.81	7.63	5.38, 6.06 (3/4)	
<b>– Two Units Modular (in)</b>	7.38, 8.06 (3/4)	6.84	8.66	5.75	7.19	7.25	7.38, 8.06 (3/4)	6.00
<b>– Three Units In-Line (in)</b>	8.06, 9.09 (3/4)		9.37	9.43	8.88	11.75	8.06, 9.09 (3/4)	
<b>– Three Units Modular (in)</b>	10.06, 11.09 (3/4)	10.52	11.97	8.75	10.25	10.97	10.06, 11.09 (3/4)	9.00
<b>Rated Pressure - Maximum</b>								
<b>– Metal Bowl (PSIG)</b>	300	250	150	175	250	200	300	300
<b>– Plastic Bowl (PSIG)</b>	150	150	150	150	150	150	150	150
<b>– Regulator (PSIG)</b>	300	300	150	200	300	250	300	200
<b>Rated Temperature - Maximum</b>								
<b>– Metal Bowl (°F)</b>	180	175	140	175	200	150	180	120
<b>– Plastic Bowl (°F)</b>	120	125	140	125	120	125	120	120
<b>– Regulator (°F)</b>	120	175	140	180	120	125	120	120
<b>Sight Gauge Material - Metal Bowl</b>	Chemically Resistant Polyurethane	Nylon	Polyamide	Polyamide	Polyetherimide Resin	Glass	Chemically Resistant Polyurethane	Polycarbonate
<b>Thread Types</b>	NPT	NPT, BSPP, BSPT	NPT, BSPT	NPT, BSPP	NPT	NPT, BSPP	NPT	NPT, BSPP, BSPT
<b>Wall Mounting Brackets Styles</b>	L	L, T, U	L, T	L, T, U	L, T	C, L, T, U	L	L
<b>Warranty (Months)</b>	18	24	12	12	12	84	18	
<b>Warranty Extension On Other Products (Same Brand Name)</b>	Not Available		Not Available	Not Available	Not Available	Not Available	Not Available	

\* Also sold under Ross





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