

## L7



- ▶ Large vacuum flows
- ▶ Small size and low weight
- ▶ Good for handling porous materials or if leakage is present

Supplied with compressed-air hose connector.

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

### Vacuum flow

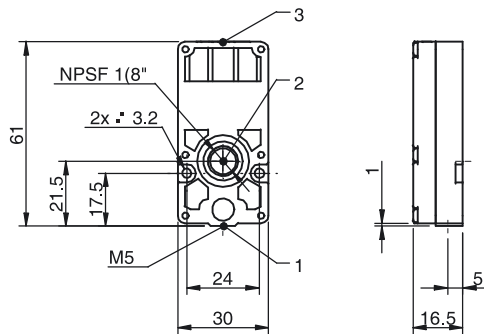
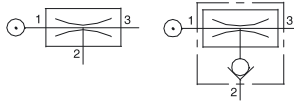
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	0.49	0.72	0.49	0.29	0.25	0.20	0.16	0.10	0.067	–	–	75

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	0.49	0.093	0.31	0.72	1.2	1.8	2.6	3.8	–	–	75

## Ordering information

Description	Art. No.
Vacuum pump MINI L7, conn. A, NBR sealings	0102853



## Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## L14



- ▶ Large vacuum flows
- ▶ Small size and low weight
- ▶ Good for handling porous materials or if leakage is present
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).  
 Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	35–60
Material		Al, ABS, PA, POM, SS, NBR

### Vacuum flow

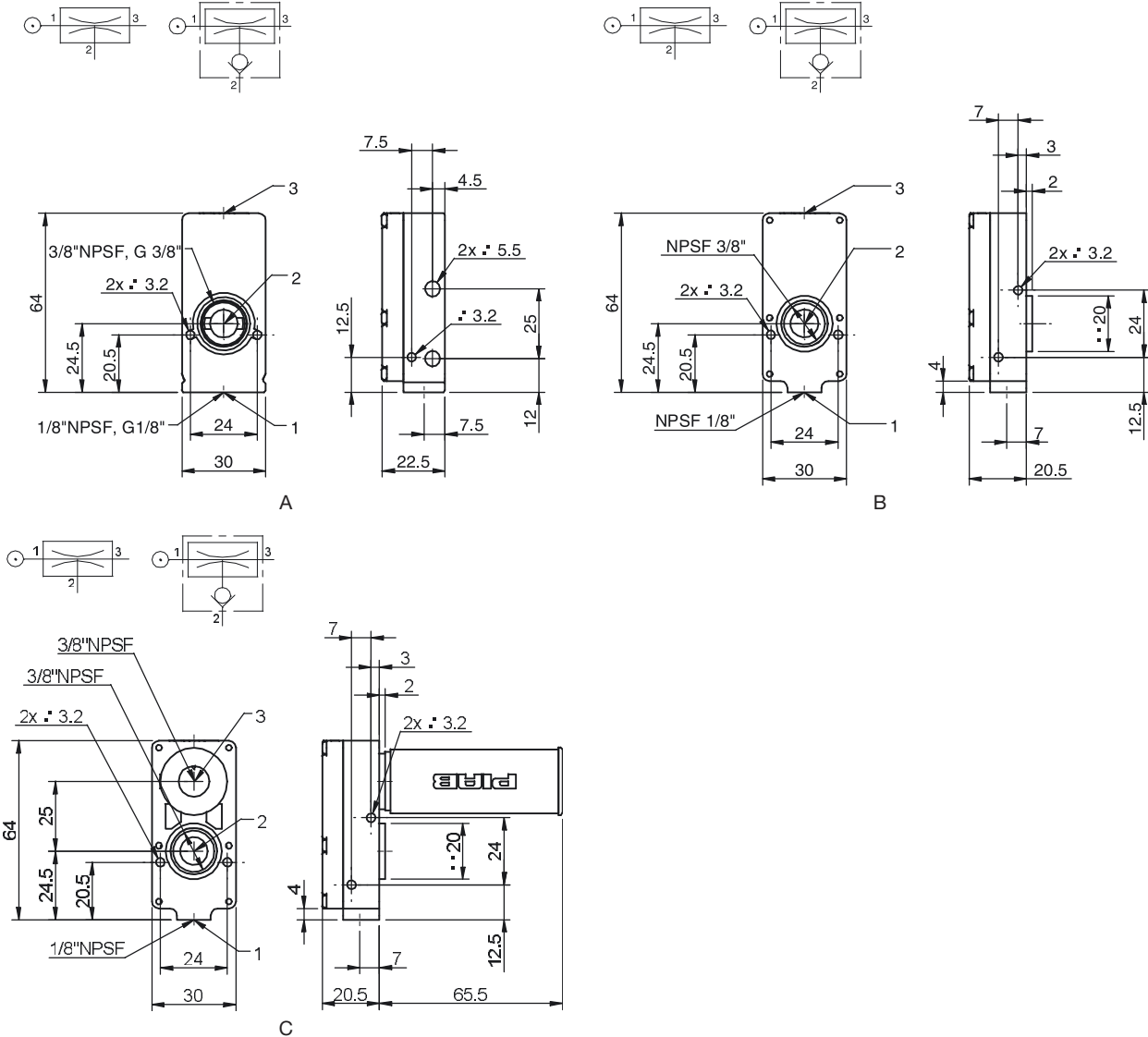
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	0.98	1.5	1.0	0.57	0.45	0.39	0.32	0.24	0.13	–	–	75

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	0.98	0.064	0.17	0.36	0.59	0.88	1.3	1.8	–	–	75

## Ordering information

	Description	Art. No.
A	Vacuum pump MINI L14, conn. B1, NBR sealings	0102831
A	Vacuum pump MINI L14, conn. B1, NBR sealings, non-return valve	0102832
B	Vacuum pump MINI L14, conn. B, NBR sealings	0103055
C	Vacuum pump MINI L14, conn. C, NBR sealings	0102743



## Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## L28



- ▶ Large vacuum flows
- ▶ Small size and low weight
- ▶ Good for handling porous materials or if leakage is present
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).  
 Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57-68
Temperature range	°C	-20-80
Weight	g	60-74
Material		Al, ABS, PA, POM, SS, NBR

### Vacuum flow

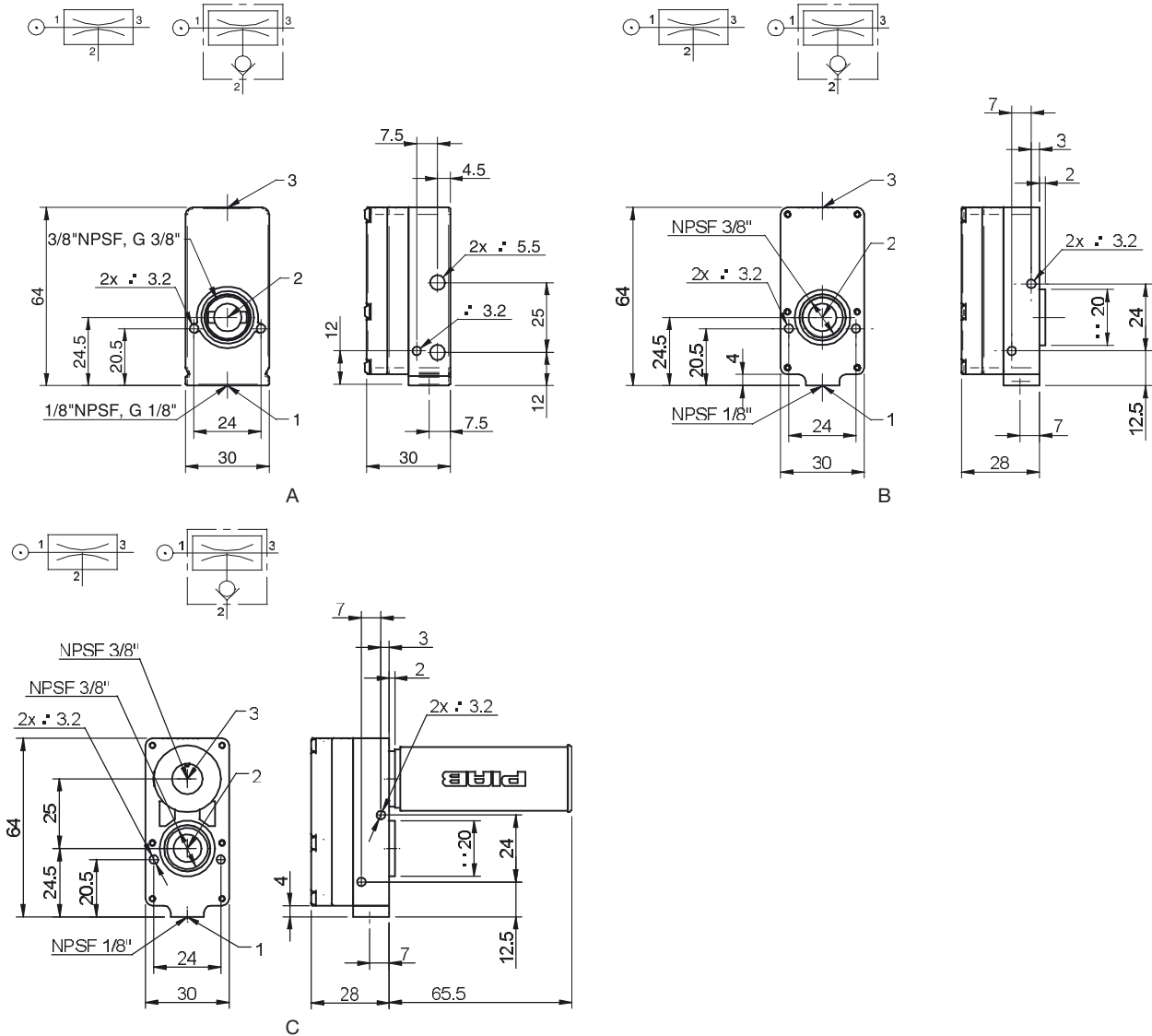
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	2.0	2.6	1.7	1.1	0.89	0.74	0.55	0.36	0.17	-	-	75

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	2.0	0.047	0.11	0.20	0.32	0.46	0.69	1.1	-	-	75

## Ordering information

	Description	Art. No.
A	Vacuum pump MINI L28, conn. B1, NBR sealings	0102833
A	Vacuum pump MINI L28, conn. B1, NBR sealings, non-return valve	0102834
B	Vacuum pump MINI L28, conn. B, NBR sealings	0103061
B	Vacuum pump MINI L28, conn. B, NBR sealings, non-return valve	0103062
C	Vacuum pump MINI L28, conn. C, NBR sealings	0102749
C	Vacuum pump MINI L28, conn. C, NBR sealings, non-return valve	0102750



## Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## M5L



- ▶ Medium vacuum levels to 90 -kPa
- ▶ Small size and low weight
- ▶ Operates at only 0.38 MPa

Supplied with compressed-air hose connector.

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57-68
Temperature range	°C	-20-80
Weight	g	30
Material		PA, POM, NBR, SS

### Vacuum flow

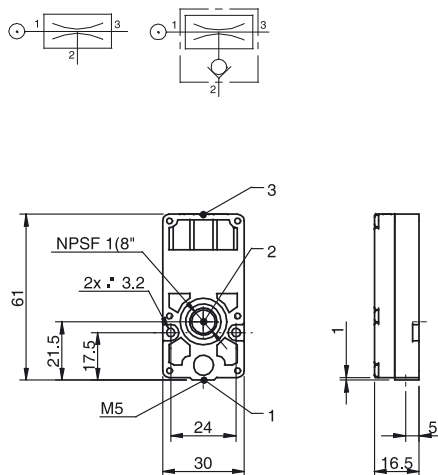
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	0.55	0.73	0.50	0.26	0.14	0.12	0.10	0.080	0.050	0.020	-	84
0.38	0.38	0.58	0.30	0.22	0.18	0.14	0.10	0.080	0.040	0.010	-	81

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	0.55	0.13	0.36	1.0	1.8	2.8	4.0	5.7	9.4	-	84
0.38	0.38	0.20	0.61	1.2	1.8	2.6	3.8	5.9	11.1	-	81

### Ordering information

Description	Art. No.
Vacuum pump MINI M5L, conn. A, NBR sealings	0102865
Vacuum pump MINI M5L, conn. A, NBR sealings, non-return valve	0102866



### Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## M10L



- ▶ Medium vacuum levels to 90 -kPa
- ▶ Small size and low weight
- ▶ Operates at only 0.38 MPa

Supplied with compressed-air hose connector.

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57-68
Temperature range	°C	-20-80
Weight	g	30
Material		PA, POM, NBR, SS

### Vacuum flow

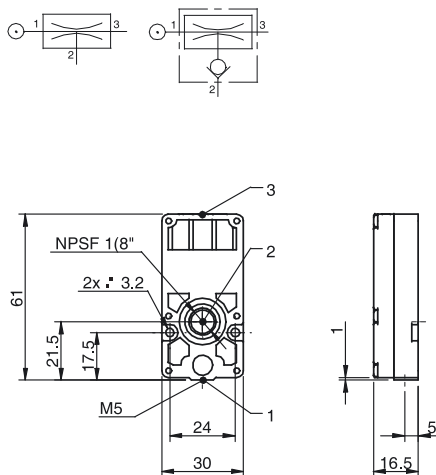
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	1.1	1.3	0.91	0.48	0.29	0.26	0.21	0.13	0.090	0.030	-	84
0.38	0.76	1.1	0.57	0.39	0.35	0.30	0.21	0.12	0.060	0.020	-	81

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	1.1	0.079	0.20	0.50	0.92	1.4	2.1	3.0	5.0	-	84
0.38	0.76	0.13	0.31	0.57	0.90	1.3	2.0	3.2	7.1	-	81

### Ordering information

Description	Art. No.
Vacuum pump MINI M10L, conn. A, NBR sealings	0102871
Vacuum pump MINI M10L, conn. A, NBR sealings, non-return valve	0102872



### Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.



## M20L



- ▶ Medium vacuum levels to 90 -kPa
- ▶ Small size and low weight
- ▶ Operates at only 0.38 MPa
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).  
 Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	60–74
Material		Al, ABS, PA, POM, SS, NBR

### Vacuum flow

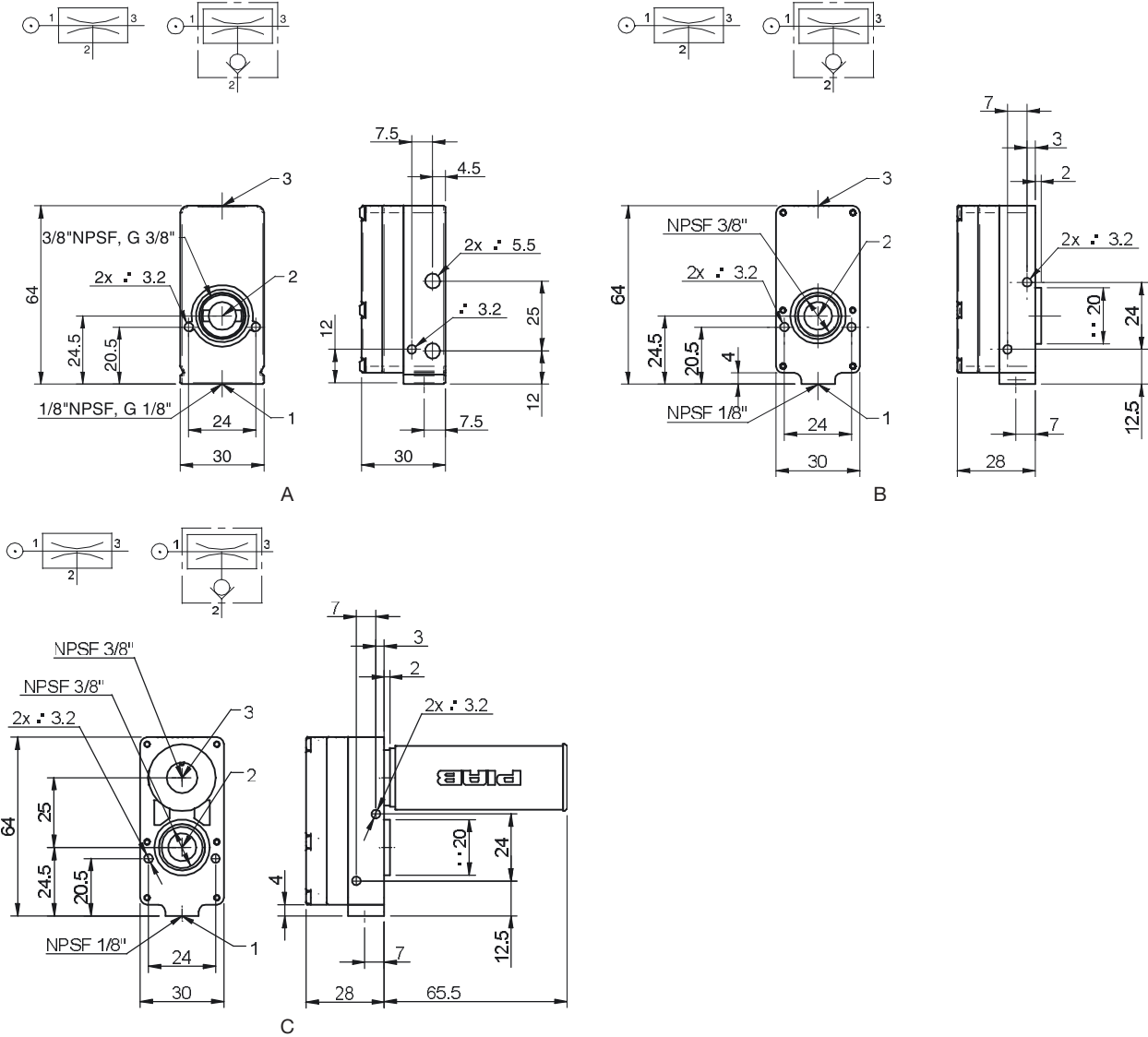
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	2.2	2.4	1.7	0.95	0.57	0.48	0.38	0.29	0.19	0.060	–	84
0.38	1.5	2.0	1.2	0.76	0.67	0.53	0.41	0.33	0.19	0.020	–	81

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	2.2	0.038	0.10	0.24	0.43	0.68	1.0	1.5	2.5	–	84
0.38	1.5	0.052	0.14	0.26	0.42	0.64	1.0	1.7	3.7	–	81

## Ordering information

	Description	Art. No.
A	Vacuum pump MINI M20L, conn. B1, NBR sealings	0102839
A	Vacuum pump MINI M20L, conn. B1, NBR sealings, non-return valve	0102840
B	Vacuum pump MINI M20L, conn. B, NBR sealings	0103079
B	Vacuum pump MINI M20L, conn. B, NBR sealings, non-return valve	0103080
C	Vacuum pump MINI M20L, conn. C, NBR sealings	0102767
C	Vacuum pump MINI M20L, conn. C, NBR sealings, non-return valve	0102768



## Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## X5L



- ▶ Extra vacuum level to 93 -kPa
- ▶ Small size and low weight
- ▶ Use in tightly sealed or non-porous applications

Supplied with compressed-air hose connector.

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	62-66
Temperature range	°C	-20-80
Weight	g	30
Material		PA, POM, NBR, SS

### Vacuum flow

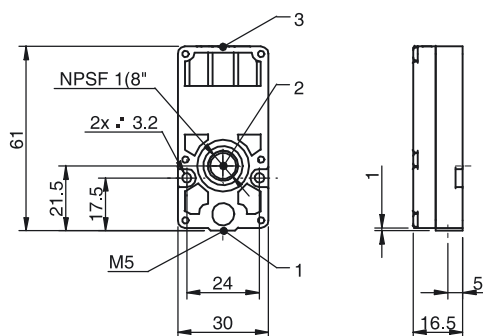
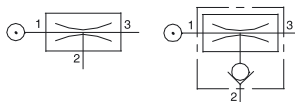
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.40	0.39	0.48	0.24	0.12	0.11	0.10	0.086	0.071	0.057	0.030	0.006	93

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum -kPa
		10	20	30	40	50	60	70	80	90		
0.40	0.39	0.17	0.82	1.7	2.7	3.9	5.4	7.4	10.6	22.5	93	

### Ordering information

Description	Art. No.
Vacuum pump MINI X5L, conn. A, NBR sealings	3222127
Vacuum pump MINI X5L, conn. A, NBR sealings, non-return valve	3222127A



### Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

## X10L



- ▶ Extra vacuum level to 93 -kPa
- ▶ Small size and low weight
- ▶ Use in tightly sealed or non-porous applications

Supplied with compressed-air hose connector.

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	62-66
Temperature range	°C	-20-80
Weight	g	30
Material		PA, POM, NBR, SS

### Vacuum flow

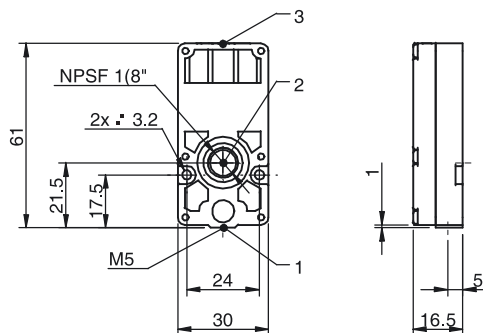
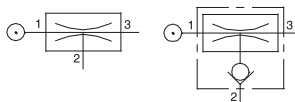
Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.40	0.79	0.76	0.35	0.24	0.21	0.16	0.13	0.10	0.070	0.040	0.010	93

### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.40	0.79	0.11	0.47	0.94	1.5	2.2	3.1	4.3	6.6	14.0	93

### Ordering information

Description	Art. No.
Vacuum pump MINI X10L, conn. A, NBR sealings	3222157
Vacuum pump MINI X10L, conn. A, NBR sealings, non-return valve	3222157A



### Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5-28, NBR	3201097
Sealing kit MINI 5-28, Viton®	3201097V
Sealing kit MINI 5-28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

Specifications subject to change without notice.

## X20L



- ▶ Extra vacuum level to 93 -kPa
- ▶ Small size and low weight
- ▶ Use in tightly sealed or non-porous applications
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).  
 Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

### Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62-66
Temperature range	°C	-20-80
Weight	g	60-74
Material		Al, ABS, PA, POM, SS, NBR

### Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.40	1.6	1.9	1.0	0.50	0.44	0.38	0.30	0.25	0.17	0.10	0.020	93

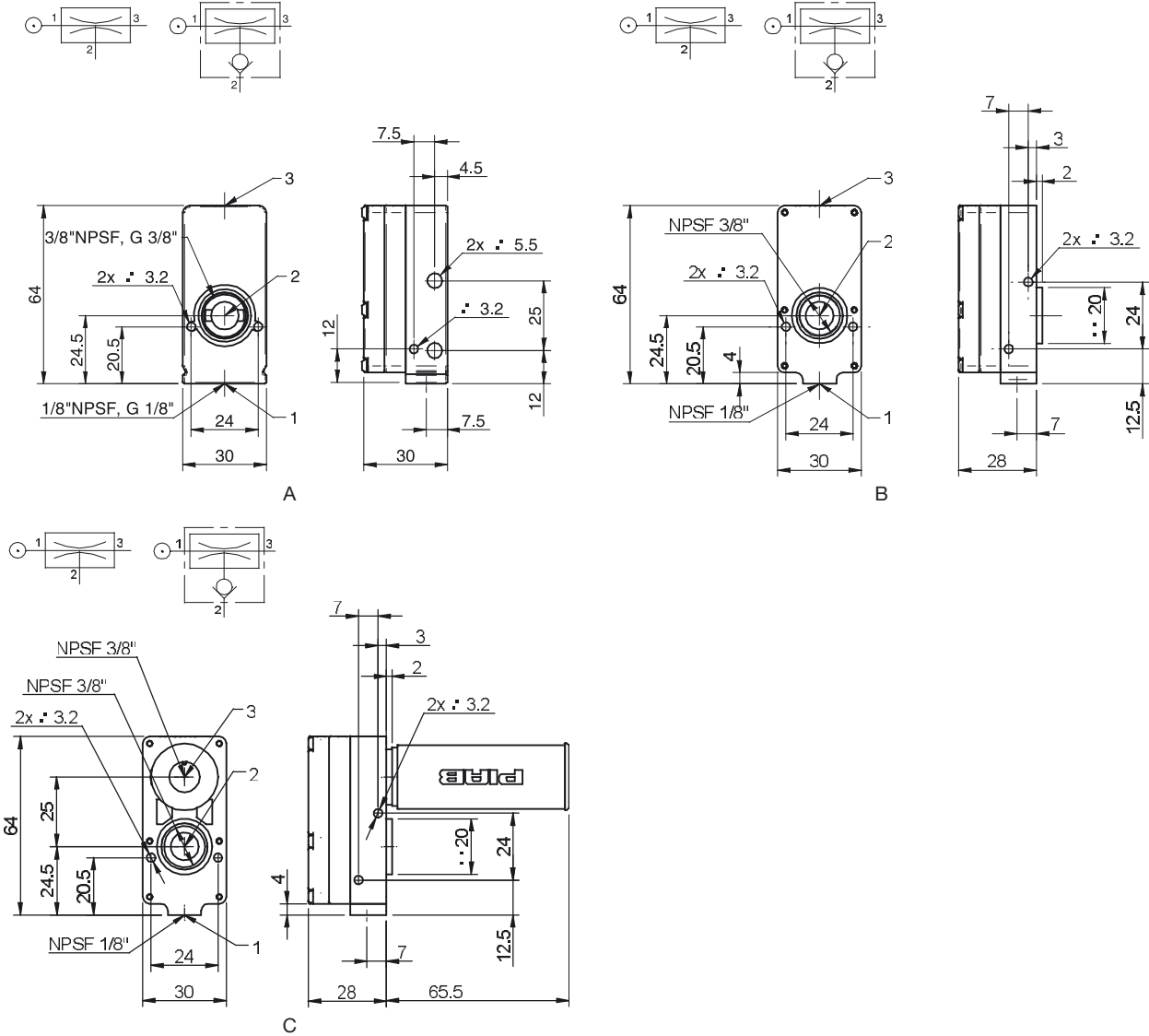
### Evacuation time

Feed pressure MPa	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.40	1.6	0.055	0.20	0.40	0.65	0.97	1.4	1.9	2.7	5.1	93

\*) Pin no. 5 is not used. M12 4-pin cable will fit the M12 5-pin connector.

## Ordering information

	Description	Art. No.
A	Vacuum pump MINI X20L, conn. B1, NBR sealings	0103203
A	Vacuum pump MINI X20L, conn. B1, NBR sealings, non-return valve	0103204
B	Vacuum pump MINI X20L, conn. B, NBR sealings	3222278
B	Vacuum pump MINI X20L, conn. B, NBR sealings, non-return valve	3222278A
C	Vacuum pump MINI X20L, conn. C, NBR sealings	3222279
C	Vacuum pump MINI X20L, conn. C, NBR sealings, non-return valve	3222279A



## Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.