



Table **K280-22/E**

## Mounting subplates type BA

single, for ISO valves size 06 to 32

**BA-\*** are single subplates with ISO mounting surface for installation of Atos valves and they are provided with threaded ports for connectio to pressure, tank and users lines. They are characterized by low pressure drops and they are specific for directional, flow and pressure control valves ISO size 06, 10, 16, 20, 25 and 32;

Special subplates or manifolds for customized applications are available upon request.

The set of screws for the valve installation on the BA subplate must be ordered separately, see the code SET SC-**\*** specified in the following sections.

### 1 TECHNICAL CHARACTERISTICS

Installation position	Any position
Operating pressure	Ports P, T, A, B = 350 bar See technical table of the valves to be assembled
Ambient temperature range	-30°C ÷ +70°C
Fluid	Hydraulic oil as per DIN 51524...535, for other fluids contact our technical office
Recommended viscosity	15 ÷ 100 mm <sup>2</sup> /s - max allowed range: see the technical table of the valves to be assembled
Max fluid contamination level	See technical table of the valves to be assembled and filter section at www.atos.com or KTF catalog
Fluid temperature	See technical table of the valves to be assembled
Surface protection	zinc coating with black passivation
Corrosion resistance	Salt spray test (EN ISO 9227) > 200 h
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006

### 2 SINGLE STATION SUBPLATES FOR VALVES SIZE 06

**ISO 4401:2005**  
Mounting surface: 4401-03-03-0-05

**Matching valves**

DH-00, DH-01	SET SC-DHZ
DH-02, DH-04	SET SC-DHZ
DH-05, DH-08	SET SC-DHZ
DH-09	SET SC-DHZ
DHI, DHA, DHW	SET SC-DHZ
DHE, DHL	SET SC-DH
DHQ	SET SC-DHZ
DLEH, DLEHM	SET SC-DH
DLAH, DLAHM	SET SC-DHZ
DLWH	SET SC-DHZ
QV-06	SET SC-QV
RZMO, RZMA	SET SC-DHZ
RZME	SET SC-DH
RZGO, RZGA	SET SC-DHZ
RZGE	SET SC-DH
DHZO, DHZA	SET SC-DHZ
DHZE, DHRZE	SET SC-DH
DLHZO, DLHZA	SET SC-DHZ
QVHZO- <b>*</b> -06	SET SC-DHZ
QVHZA	SET SC-DHZ

**Set of screw**  
(to be ordered separately)

**VERSIONS**

**BA-202:** basic version without ports X and Y; ports P, A, B, T (3/8") on the base.

**BA-204:** basic version without ports X and Y; ports P and T (3/8") on the base; ports A and B (3/8") on the side.

**BA-302:** basic version without ports X and Y; ports P, A, B, T (1/2") on the base.

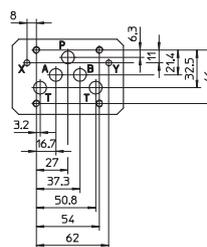
**BA-302/Y:** version dimensionally identical to the corresponding basic version with the addition of X and Y ports (1/8") on the base (see figure on the left).  
The /Y version is always used for DHZO and DLHZO valves when drain from port Y is required.

X and Y ports are only present in the /Y versions.

Code	Ports (GAS) A,B,P,T (X-Y)	Ø Counterbore S [mm]	R [mm]	Mass [Kg]
<b>BA-202</b>	3/8"	-	-	1,2
<b>BA-204</b>	3/8"	-	25,5	1,8
<b>BA-302 (Y)</b>	1/2"	(1/8")	30	1,8

3 SINGLE STATION SUBPLATES FOR VALVES SIZE 10

**ISO 4401:2005**  
Mounting surface: 4401-05-05-0-05

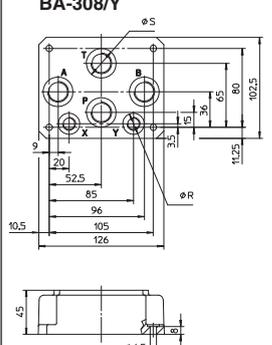


**Matching valves**

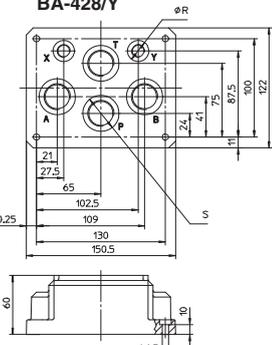
DK-11	SET SC-DK/DP-1
DK-12	SET SC-DK/DP-1
DKE	SET SC-DK/DP-1
DKQ	SET SC-DK/DP-1
DKZOR	SET SC-DK/DP-1
DKZA	SET SC-DK/DP-1
DLKZOR	SET SC-DK/DP-1
DLKZA	SET SC-DK/DP-1

**Set of screw**  
(to be ordered separately)

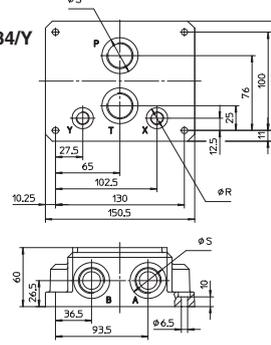
**BA-308/Y**



**BA-428/Y**



**BA-434/Y**



**VERSIONS**

**BA-308:** basic version without ports X and Y; ports P, A, B, T (1/2") on the base.

**BA-428:** basic version without ports X and Y; ports P, A, B, T (3/4") on the base.

**BA-434:** basic version without ports X and Y; ports P and T (3/4") on the base; ports A and B (3/4") on the side.

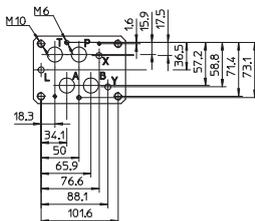
**BA-\*\*\*Y:** versions dimensionally analogous to the corresponding basic versions with the addition of X and Y ports (1/4") on the base (see figure on the left).  
The Y versions are always used for valves type DKZOR, DLKZO, when drainage from port Y is required.

X and Y ports are only present in the /Y versions.

Code	Ports (GAS) A,B,P,T	(X-Y)	Ø S [mm]	Counterbore R [mm]	Mass [Kg]
<b>BA-308 (Y)</b>	1/2"	(1/4")	30	21,5	2,5
<b>BA-428 (Y)</b>	3/4"	(1/4")	36,5	21,5	5,5
<b>BA-434 (Y)</b>	3/4"	(1/4")	36,5	21,5	8,5

4 SINGLE STATION SUBPLATES FOR VALVES SIZE 16

**ISO 4401:2005**  
Mounting surface: 4401-07-07-0-05

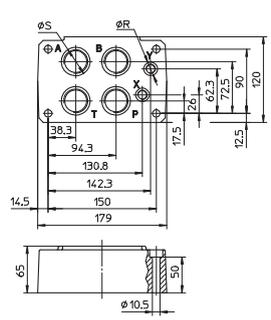


**Matching valves**

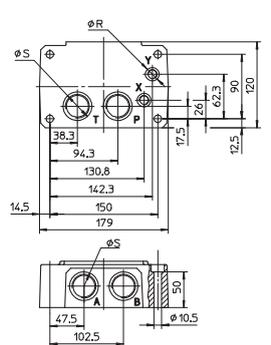
DP-21	SET SC-DP2
DP-24	SET SC-DP2
DP-25	SET SC-DP2
DPH-28	SET SC-DP2
DPH-29	SET SC-DP2
DPHI-2	SET SC-DP2
DPHE-2	SET SC-DP2
DPHA-2	SET SC-DP2
DPHW-2	SET SC-DP2
DPZO-*-2	SET SC-DP2
DPZA-*-2	SET SC-DP2

**Set of screw**  
(to be ordered separately)

**BA-518**



**BA-519**



**VERSIONS**

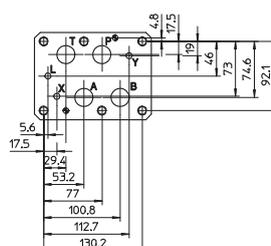
**BA-518:** basic version with ports P, A, B, T (1") and X, Y (1/4") on the base.

**BA-519:** basic version with ports P, T (1") and X, Y (1/4") on the base; ports A, B (1") on the side.

Code	Ports (GAS) A,B,P,T	X-Y	Ø S [mm]	Counterbore R [mm]	Mass [Kg]
<b>BA-518</b>	1"	1/4"	46	21,5	8
<b>BA-519</b>	1"	1/4"	46	21,5	8

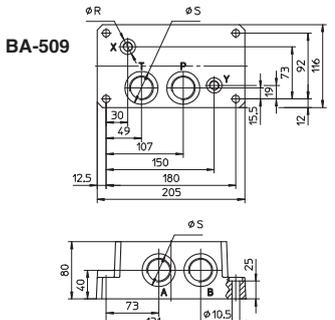
5 SINGLE STATION SUBPLATES FOR VALVES SIZE 25

**ISO 4401:2005**  
Mounting surface: 4401-08-08-0-05

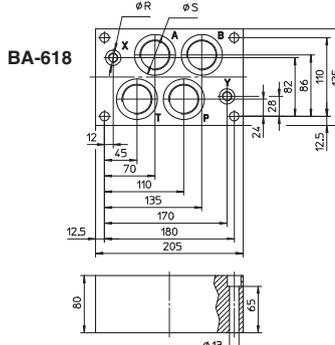


**Matching valves**

Matching valves	Set of screw (to be ordered separately)
DP-41	SET SC-DP4
DP-44	SET SC-DP4
DP-45	SET SC-DP4
DPH-48	SET SC-DP4
DPH-49	SET SC-DP4
DPHI-4	SET SC-DP4
DPHE-4	SET SC-DP4
DPHA-4	SET SC-DP4
DPHW-4	SET SC-DP4
DPZO-*-4	SET SC-DP4
DPZA-*-4	SET SC-DP4



**BA-509**



**BA-618**

**VERSIONS**

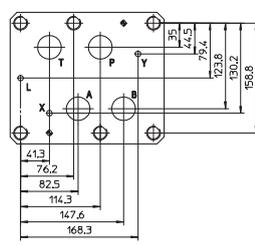
**BA-509:** basic version with ports P, T (1") and X, Y (1/4") on the base, ports A, B (1") on the side.

**BA-618:** basic version with ports P, A, B, T (1 1/4") and X, Y (1/4") on the base.

Code	Ports (GAS) A,B,P,T	X-Y	Ø Counterbore S [mm]	R [mm]	Mass [Kg]
<b>BA-509</b>	1"	1/4"	46	21,5	12,5
<b>BA-618</b>	1 1/4"	1/4"	57	21,5	13,5

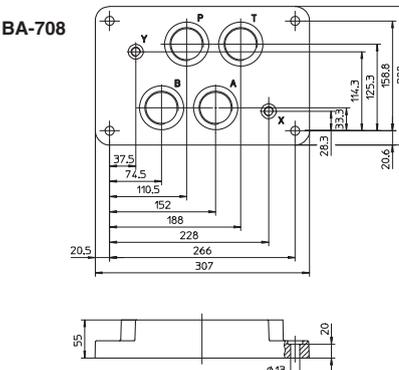
6 SINGLE STATION SUBPLATES FOR VALVES SIZE 32

**ISO 4401:2005**  
Mounting surface: 4401-10-09-0-05



**Matching valves**

Matching valves	Set of screw (to be ordered separately)
DP-64	SET SC-DP6
DP-65	SET SC-DP6
DPH-68	SET SC-DP6
DPH-69	SET SC-DP6
DPHI-6	SET SC-DP6
DPHE-6	SET SC-DP6
DPHA-6	SET SC-DP6
DPZO-*-6	SET SC-DP6
DPZA-*-6	SET SC-DP6



**BA-708**

**VERSIONS**

**BA-708:** basic version with ports P, A, B, T (1 1/2") and X, Y (1/4") on the base.

Code	Ports (GAS) A,B,P,T	X-Y	Ø Counterbore S [mm]	R [mm]	Mass [Kg]
<b>BA-708</b>	1 1/2"	1/4"	63,5	21,5	17

7 SINGLE STATION SUBPLATES FOR PRESSURE CONTROL VALVE SIZE 10, 20 AND 32

**Mounting surface ISO 6264: 1998**

**Matching valves Set of screw**  
to be ordered separately

AGAM-10	SET SC-AGA-10
AGMZO-10	SET SC-AGA-10
AGMZA-10	SET SC-AGA-10
AGAM-20	SET SC-AGA-20
AGMZO-20	SET SC-AGA-20
AGMZA-20	SET SC-AGA-20
AGAM-32	SET SC-AGA-32
AGMZO-32	SET SC-AGA-32
AGMZA-32	SET SC-AGA-32

size	A	B	C	D	E	F	G
10	53,8	47,5	22,1	22,1	-	53,8	26,9
20	66,7	55,6	33,4	11,1	23,8	70	35
32	88,9	76,2	44,5	12,7	31,8	82,6	41,3

**BA-306 Mounting surface ISO 6264-06-09-0-97**  
matching valves:  
AGAM-10  
AGMZO--10  
AGMZA--10

**BA-506 Mounting surface ISO 6264-08-13-0-97**  
matching valves:  
AGAM-20  
AGMZO--20  
AGMZA--20

**BA-706 Mounting surface ISO 6264-10-17-0-97**  
matching valves:  
AGAM-32  
AGMZO--32  
AGMZA--32

Code	a	b	c	d	e	f	g	h	i	l	m	Ø Blade		
												S	R	T
<b>BA - 306</b>	130	104	97	64,5	19,5	27	54	80	40	8,4	15	36,5	21,5	30
<b>BA - 506</b>	180	150	133,25	92,25	37,25	37,5	75	105	50	10,5	13	46	21,5	46
<b>BA - 706</b>	204	175	173,5	123,5	43,5	50	100	130,5	60	10,5	13	63,5	21,5	63,5

**VERSIONS**

**BA-306, BA-506, BA-706:** basic version, see figure on left and dimensional tables.

Code	size	Ports (GAS)			Mass [Kg]
		P	T	X	
<b>BA - 306</b>	10	1/2"	3/4"	1/4"	1,5
<b>BA - 506</b>	20	1"	1"	1/4"	3,5
<b>BA - 706</b>	32	1 1/2"	1 1/2"	1/4"	6

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**Mounting surface ISO 5781: 2000**

**Matching valves Set of screw**  
to be ordered separately

AGI*-10(20)	SET SC-AGI
AGRL(E)-10(20)	SET SC-AGI
AGRCZO-10(20)	SET SC-AGI
AGRCZA-10(20)	SET SC-AGI
AGI*-32	SET SC-AGI-32
AGRL(E)-32	SET SC-AGRL-32

**Mounting surface ISO 5781-06-07-0-00**  
matching valves:  
AGI\*-10  
AGRL-10  
AGRL-10  
AGRZO--10

**Mounting surface ISO 5781-08-10-0-00**  
matching valves:  
AGI\*-20  
AGRL-20  
AGRL-20  
AGRZO--20

**Mounting surface ISO 5781-10-13-0-00**  
matching valves:  
AGI\*-32  
AGRL-32  
AGRL-32

Code	a	b	c	d	e	f	g	h	i	l	m	n	p	q	Ø Blade	
															S	R
<b>BA - 305</b>	113	90	67	45	45	23	8	33,3	58,7	66,7	90	30	10,5	10	30	21,5
<b>BA - 505</b>	133	110	82,5	64,5	45,5	27,5	6,4	39,7	73	79,4	102,5	42	10,5	10	46	21,5
<b>BA - 705</b>	184	160	120	95	65	40	6	48,5	91	97	121	60	10,5	13	63,5	21,5

**VERSIONS**

**BA-305, BA-506 and BA-705:** see figure on left and dimensional tables.

Code	size	Ports (GAS)			Mass [Kg]
		A	B	X-Y	
<b>BA - 305</b>	10	1/2"	1/2"	1/4"	1
<b>BA - 505</b>	20	1"	1"	1/4"	2
<b>BA - 705</b>	32	1 1/2"	1 1/2"	1/4"	7,5



Table **K290-10/E**

## Mounting subplates type **BA-214**, **314** and **244**

Multi-station, for valves ISO 4401 size 06 and 10



**BA-214**, **BA-314** and **BA-244** are multi-station subplates for assembling of directional and modular valves with mounting surface ISO 4401, size 06 and 10.

They are made in cast iron with high corrosion protection black zinc surface treatment, and they are provided with P, T passing through lines and A, B user ports connections.

**BA-214** are **multistation subplates** with 1 to 10 stations for valves ISO size 06.

**BA-314** are **multistation subplates** with 1 to 6 stations for valves ISO size 10.

**BA-244** are **modular subplates** with 1 to 4 stations for valves ISO 4401 size 06.

They are designed for installation on power units cover and they can be easily assembled together by means of n° 4 screws M6 class 12.9 (included in the supply), combining up to max 12 stations.

### 1 MODEL CODE OF SUBPLATES TYPE BA-214 and BA-314

<b>BA-214</b>	/	<b>5</b>	/	<b>P</b>	<b>*</b>
<b>Type of subplate:</b> <b>BA-214</b> = for valves ISO size 06 <b>BA-314</b> = for valves ISO size 10				Series number	
<b>Number of stations</b> , see section 4 5 6: <b>1</b> = one station <b>6</b> = six stations <b>2</b> = two stations <b>7</b> = seven stations (only for BA-214) <b>3</b> = three stations <b>8</b> = eight stations (only for BA-214) <b>4</b> = four stations <b>9</b> = nine stations (only for BA-214) <b>5</b> = five stations <b>10</b> = ten stations (only for BA-214)				- = with A and B lateral ports <b>P</b> = with A and B rear ports (not for <b>BA-214/1</b> and all <b>BA-314</b> )	

Model	Port P	Port T	Ports A, B	Qmax	Qmax ports A, B	Pmax
BA-214	G 1/2"	G 1/2"	G 3/8" lateral	80 l/min	60 l/min	350 bar
BA-214*/P	G 1/2"	G 1/2"	G 3/8" rear	80 l/min	60 l/min	350 bar
BA-314	G 3/4"	G 1"	G 3/4" lateral	150 l/min	100 l/min	300 bar

### 2 MODEL CODE OF SUBPLATES TYPE BA-244

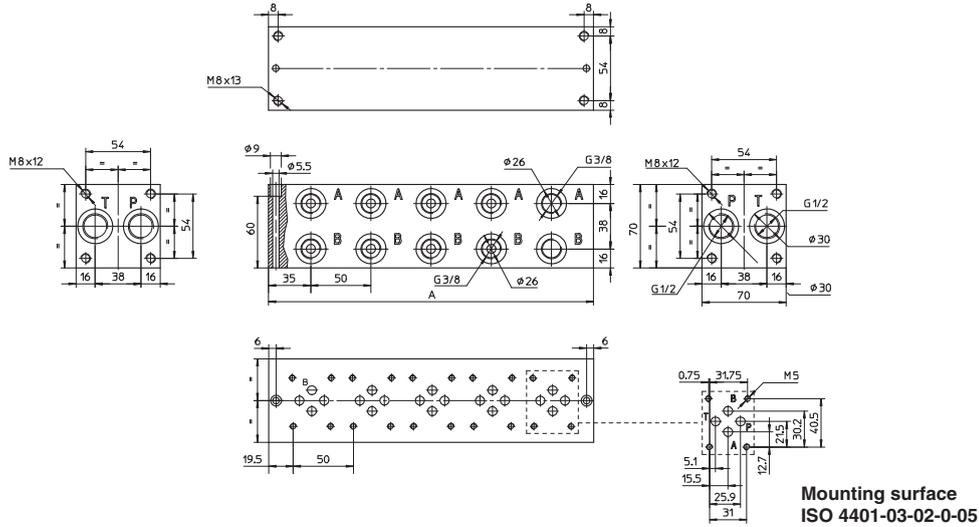
<b>BA-244</b>	/	<b>4</b>	<b>*</b>
<b>Type of subplate:</b> <b>BA-244</b> = modular subplate for valves ISO size 06		<b>Number of stations:</b> <b>1</b> = one station <b>3</b> = three stations <b>2</b> = two stations <b>4</b> = four stations	
		Series number	

### 3 TECHNICAL CHARACTERISTICS

Installation position	Any position. For BA-244, a maximum of 12 stations can be combined; in case of horizontal mounting proper brackets are recommended.
Operating pressure	Ports P, T, A, B = <b>350 bar</b> (BA-214), <b>300 bar</b> (BA-314), <b>250 bar</b> (BA-244) See technical table of the valves to be assembled
Ambient temperature range	-30°C ÷ +70°C
Fluid	Hydraulic oil as per DIN 51524...535, for other fluids contact our technical office
Recommended viscosity	15÷100 mm <sup>2</sup> /s - max allowed range: see the technical table of the valves to be assembled
Max fluid contamination level	See technical table of the valves to be assembled and filter section at www.atos.com or KTF catalog
Fluid temperature	See technical table of the valves to be assembled
Surface protection	zinc coating with black passivation
Corrosion resistance	Salt spray test (EN ISO 9227) > 200 h
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006

**4 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-214 [mm]**

Ports P and T = G 1/2" (passing through)  
 Ports A and B = G 3/8"  
 $Q_{max} = 80$  l/min  
 $Q_{max}$  A and B ports = 60 l/min  
 $P_{max} = 350$  bar



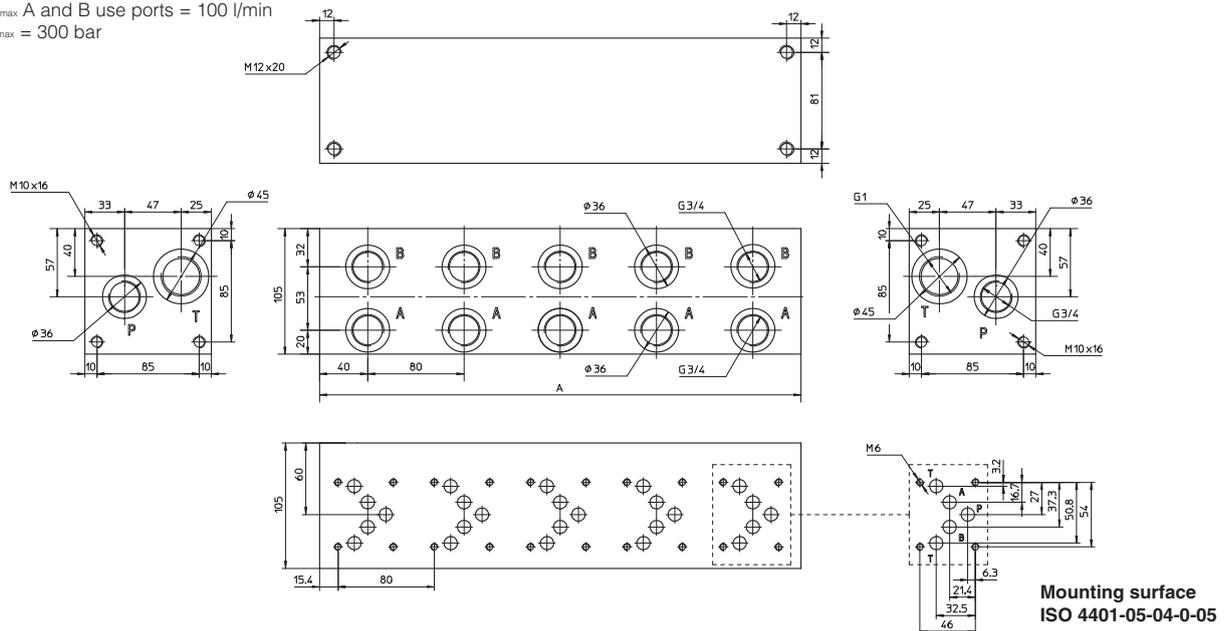
The length of the subplate depends to the number of stations as shown in the table below

Stations	1	2	3	4	5	6	7	8	9	10
Dimension A	70	120	170	220	270	320	370	420	470	520
Mass [Kg]	2	3,5	5	6,5	8	9,5	11	12,5	14	15,5

The 5-station version is shown in the drawing

**5 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-314 [mm]**

Ports P = G 3/4" (passing through)  
 Ports T = G 1" (passing through)  
 Ports A and B = G 3/4"  
 $Q_{max} = 150$  l/min  
 $Q_{max}$  A and B use ports = 100 l/min  
 $P_{max} = 300$  bar



The length of the subplate depends to the number of stations as shown in the table below

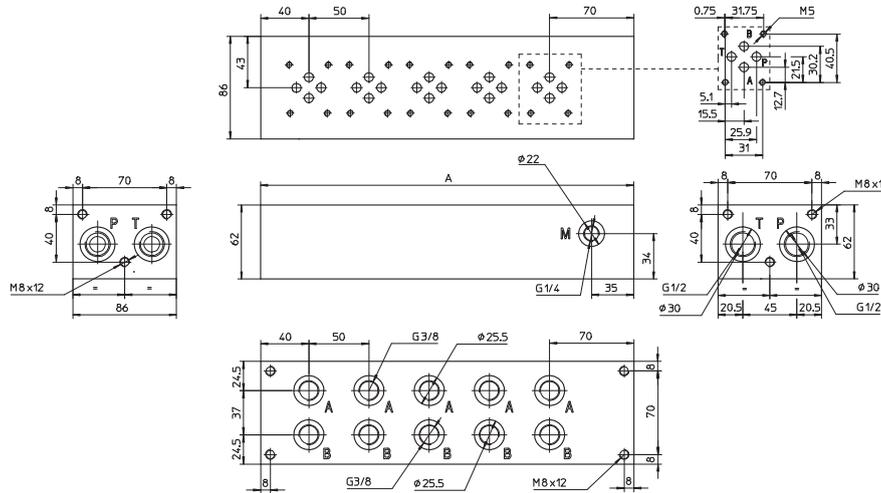
Stations	1	2	3	4	5	6
Dimension A	80	160	240	320	400	480
Mass [Kg]	4	8,5	13	17,5	22	26,5

The 5-station version is shown in the drawing

**6 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-214/\*P [mm]**

Ports P and T = G 1/2"  
 Ports A and B = G 3/8"  
 $Q_{max} = 80$  l/min  
 $Q_{max}$  A and B ports = 60 l/min  
 $P_{max} = 350$  bar

Mounting surface  
 ISO 4401-03-02-0-05



The length of the subplate depends to the number of stations as shown in the table below

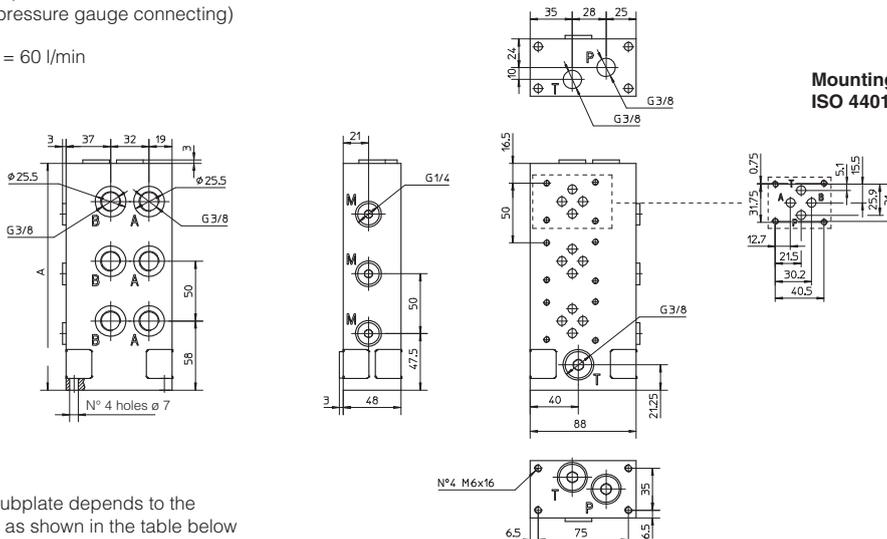
Stations	2	3	4	5	6	7	8	9	10
Dimension A	160	210	260	310	360	410	460	510	560
Mass [Kg]	5,4	7	8,7	10,4	12,1	13,8	15,5	17,2	18,9

The 5-station version is shown in the drawing

**7 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-244 [mm]**

Ports P and T = G 3/8" (passing through)  
 Ports A and B = G 3/8"  
 Ports M = G 1/4" (pressure gauge connecting)  
 $Q_{max} = 35$  l/min  
 $Q_{max}$  A and B ports = 60 l/min  
 $P_{max} = 250$  bar

Mounting surface  
 ISO 4401-03-02-0-05



The length of the subplate depends to the number of stations as shown in the table below

Stations	1	2	3	4
Dimension A	90	140	190	240
Mass [Kg]	2,5	3,5	5,2	7

The 3-station version is shown in the drawing

Fastening bolts: 4 exagonal head screws M6x20 class 12.9 included in the supply  
 Tightening torque = 15 Nm  
 Seals: 2 OR-3081 included in the supply



Table **K295-10/E**

## Mounting subplates type BA-214/\*-AL

multi-station, for valves ISO 4401 size 06, in aluminium

The multi-stations subplates type BA-214/\*-AL for directional control valves are in aluminium and their mounting surface are in accordance with the international standards ISO 4401.

They perform limited pressure drop and are made by a **single subplate** from 1 to 10 stations for directional valves and modular elements ISO 4401 size 06.

Main characteristics:

P and T ports = G 1/2; A and B lateral use ports G 3/8; M pressure gauge connection G1/4; Q<sub>max</sub> = 80 l/min; Q<sub>max</sub> use ports = 60 l/min; P<sub>max</sub> = 250 bar

Note: for versions /M and /MH Q<sub>max</sub> = 35 l/min;

For other technical characteristics, see section 2 and 3.

### 1 MODEL CODE OF SUBPLATES TYPE BA-214/\*-AL

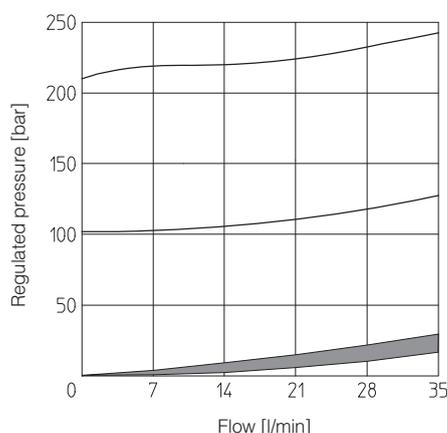
<b>BA-214</b>	/	<b>5</b>	/	<b>MH</b>	/	<b>210</b>	-	<b>AL</b>	*	<b>PE</b>
<b>Type of subplate:</b> BA-214 = for valves ISO size 06 On request, available with rear ports A and B								Series number		Seals material: only for <b>M, MH</b> - = HNBR <b>PE</b> = HNBR
<b>Number of stations:</b> 1 = one station      6 = six stations 2 = two stations    7 = seven stations 3 = three stations   8 = eight stations 4 = four stations    9 = nine stations 5 = five stations     10 = ten stations								AL = in aluminium On request, available with anodizing		
								<b>Pressure range of pressure relief valve, for versions /M and /MH:</b> 100 = 100 bar 210 = 210 bar 250 = 250 bar		
								<b>M</b> = with direct operated pressure relief cartridge CART M-5/** - see tab. C010 (available also as spare part)		
								<b>MH</b> = with pressure relief valve type CART M-5, arranged with venting solenoid valve		

### 2 TECHNICAL CHARACTERISTICS

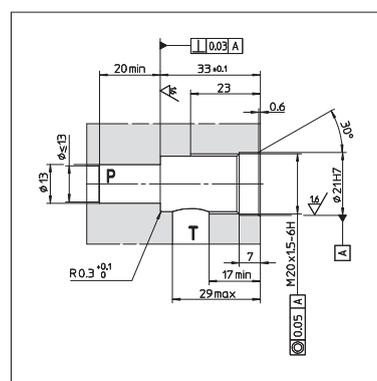
Installation position	Any position.
Operating pressure	Ports P, T, A, B = <b>250 bar</b> See technical table of the valves to be assembled
Ambient temperature range	-30°C ÷ +70°C
Fluid	Hydraulic oil as per DIN 51524...535, for other fluids contact our technical office
Recommended viscosity	15÷100 mm <sup>2</sup> /s - max allowed range: see the technical table of the valves to be assembled
Max fluid contamination level	See technical table of the valves to be assembled and filter section at www.atos.com or KTF catalog
Fluid temperature	See technical table of the valves to be assembled
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006

### 3 REGULATED PRESSURE/FLOW DIAGRAM FOR VERSIONS /M and /MH

MAIN CHARACTERISTICS OF ENCLOSED PRESSURE RELIEF VALVE	
Model code	Regulation range
CART M-5/100	3 ÷ 100 bar
CART M-5/210	5 ÷ 210 bar
CART M-5/250	7 ÷ 250 bar
Q <sub>max</sub> = 35 l/min	



### 4 INSTALLATION DIMENSIONS OF CART M-5/\*\*



5 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-214/\*-AL [mm]

**Hydraulic scheme**

Ports P and T = G 1/2  
Use ports A and B = G 3/8  
Pressure gauge port M = G 1/4 (plugged)  
 $Q_{max} = 80$  l/min  
 $Q_{max}$  use ports = 60 l/min  
 $P_{max} = 210$  bar

**The 3-stations subplate is shown in the drawing**  
The length of the subplate varies with the number of stations as shown in the table below

Stations	1	2	3	4	5	6	7	8	9	10
Dimension A	70	120	170	220	270	320	370	420	470	520
Mass [Kg]	1	1,4	2	2,6	3,2	3,8	4,4	5	5,6	6,2

**Mounting surface ISO 4401-03-02-0-05**

6 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-214/\*M/\*-AL [mm]

**Hydraulic scheme**

Ports P and T = G 1/2  
Use ports A and B = G 3/8  
Pressure gauge port M = G 1/4 (plugged)  
 $Q_{max} = 35$  l/min  
 $Q_{max}$  use ports = 35 l/min  
 $P_{max} = 210$  bar

**The 3-stations subplate is shown in the drawing**  
The length of the subplate varies with the number of stations as shown in the table below

Stations	1	2	3	4	5	6	7	8	9	10
Dimension A	105	155	205	255	305	355	405	455	505	555
Mass [Kg]	1,1	1,5	2,1	2,7	3,3	3,9	4,5	5,1	5,7	6,3

**Mounting surface ISO 4401-03-02-0-05**

7 OVERALL DIMENSIONS OF SUBPLATES TYPE BA-214/\*MH/\*-AL [mm]

**Hydraulic scheme**

Ports P and T = G 1/2  
Use ports A and B = G 3/8  
Pressure gauge port M = G 1/4 (plugged)  
 $Q_{max} = 35$  l/min  
 $Q_{max}$  use ports = 35 l/min  
 $P_{max} = 210$  bar

**The 3-stations subplate is shown in the drawing**  
The length of the subplate varies with the number of stations as shown in the table below

Stations	1	2	3	4	5	6	7	8	9	10
Dimension A	120	170	220	270	320	370	420	470	520	570
Mass [Kg]	1,2	1,6	2,2	2,8	3,4	4	4,6	5,2	5,8	6,4

**Mounting surface ISO 4401-03-02-0-05**

(1) The venting directional valve in the dashed line must be ordered separately