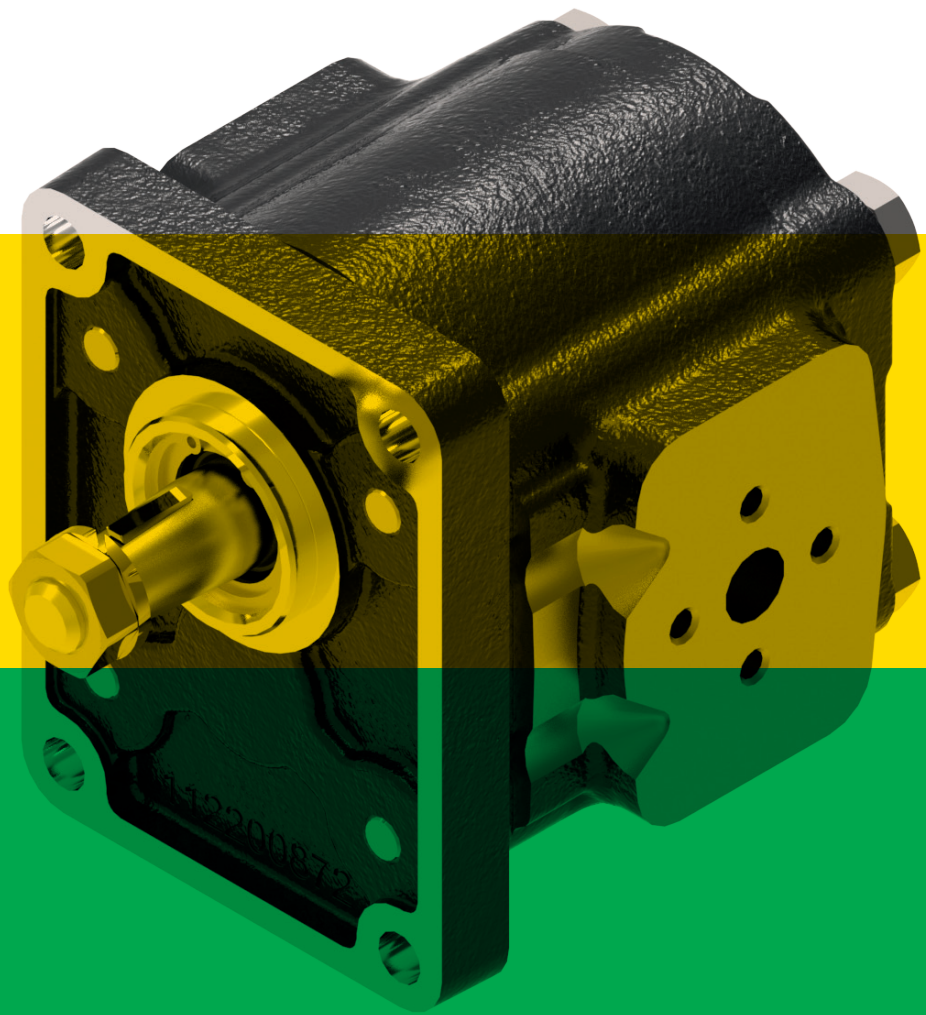

2PGSE

Low Noise - High Pressure Cast Iron Gear Pumps

Technical Brochure



E0.149.0226.11.00IM00



COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001



Symbol Designation



INFORMATION:

Indicates reminders and communications to be taken into account for the correct configuration and mounting of the product.



CAUTION:

Indicates the recommendations and rules, to be observed before proceeding with the product's configuration.

Final revised edition - February 2026

Information and data in this catalogue are all referring to the standard product. Salami's policy consists of a continuous product development; therefore, we reserve the rights to change product's specifications and data performances at any time and without any prior notice.

Contents

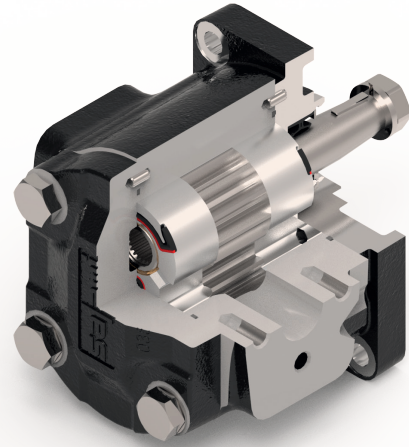
Main Features.....	4
Working Conditions.....	5
Single Unit	6
Ports.....	7
Standard Configurations	9
How To Order Single Pumps	10
How To Order Multiple Pumps	11



Main Features

2PGSE is a Low Noise gear pump, available with displacements from 6.5 cm³/rev to 28.1 cm³/rev (from 0.40 cu.in/rev to 1.71 cu.in/rev). Continuous pressure up to 300 bar (4350 psi).

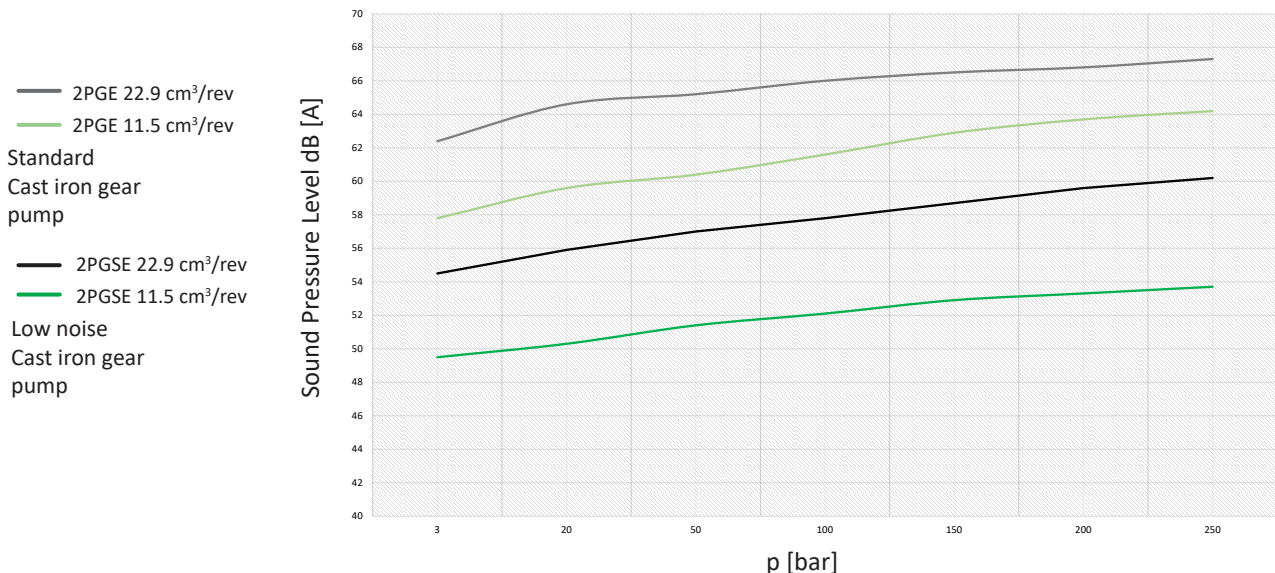
- 80% reduction of pressure ripples;
- Reduction of the noise emissions by up to 10dB(A) (average) compared to standard gear pumps;
- Downstream pipe vibration reduction;
- Longer pump life;
- Gear: dual flank engagement, tooth profile optimization to reduce relative sliding, specific heat treatment to minimize the gear deformation;
- Axial balancing bushings optimized to minimize the volume trapped during teeth engagement;
- High volumetric efficiency achieved by floating bushings and axial compensation;
- 12 teeth integral shaft: one piece, solid gear;
- Modular construction;
- Compact design;
- Cast iron gear housing, flanges and covers;
- Double shaft seal;
- Wide range of rear covers with built-in valves;
- Flanges: European, German, SAE A, SAE B;
- Ports: European, German and American SAE J518 - standard pressure series 3000 psi, flanged ports. BSPP (Gas) and ODT (SAE) threaded ports;
- Shafts: European and American standards;
- Many common parts with 2PGE.



Applications

- Hydraulic presses, waste compactors, forklifts, drives for elevators/hoists, agriculture equipment, municipal vehicles, earthmoving machines, hydraulic steering systems.

Noise Level Reduction

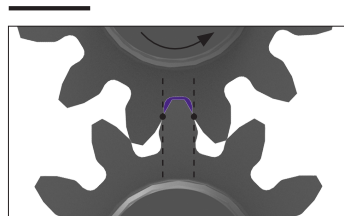


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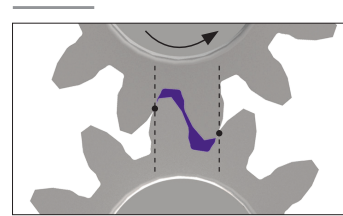


Main Features

Pressure Ripple Comparison



Dual flank low noise gear pump



Standard gear pump

Working Conditions

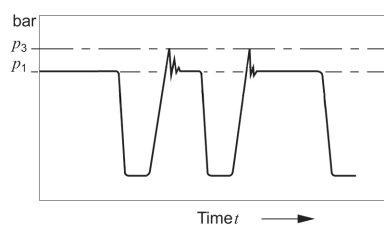
HYDRAULIC FLUID

Mineral oil according to DIN 51524, other hydraulic fluids on request.

Pump inlet pressure (absolute pressure)		0.8 to 1.5 bar (11.6 to 21.7 psi)
Viscosity	Minimum operating fluid viscosity	12 mm ² /sec
	Max starting viscosity	800 mm ² /sec
	Suggested fluid viscosity range	17 ÷ 65 mm ² /sec
Temperature	fluid operating temperature range with NBR seals	-25 ÷ 80 °C
	fluid operating temperature range with FPM seals (Viton)	-20 ÷ 110°C
	fluid operating temperature range with HNBR seals*	-30 ÷ 110°C

* Available on request

Definition of Pressures



p_3 = Peak pressure

p_1 = Max. Continuous pressure

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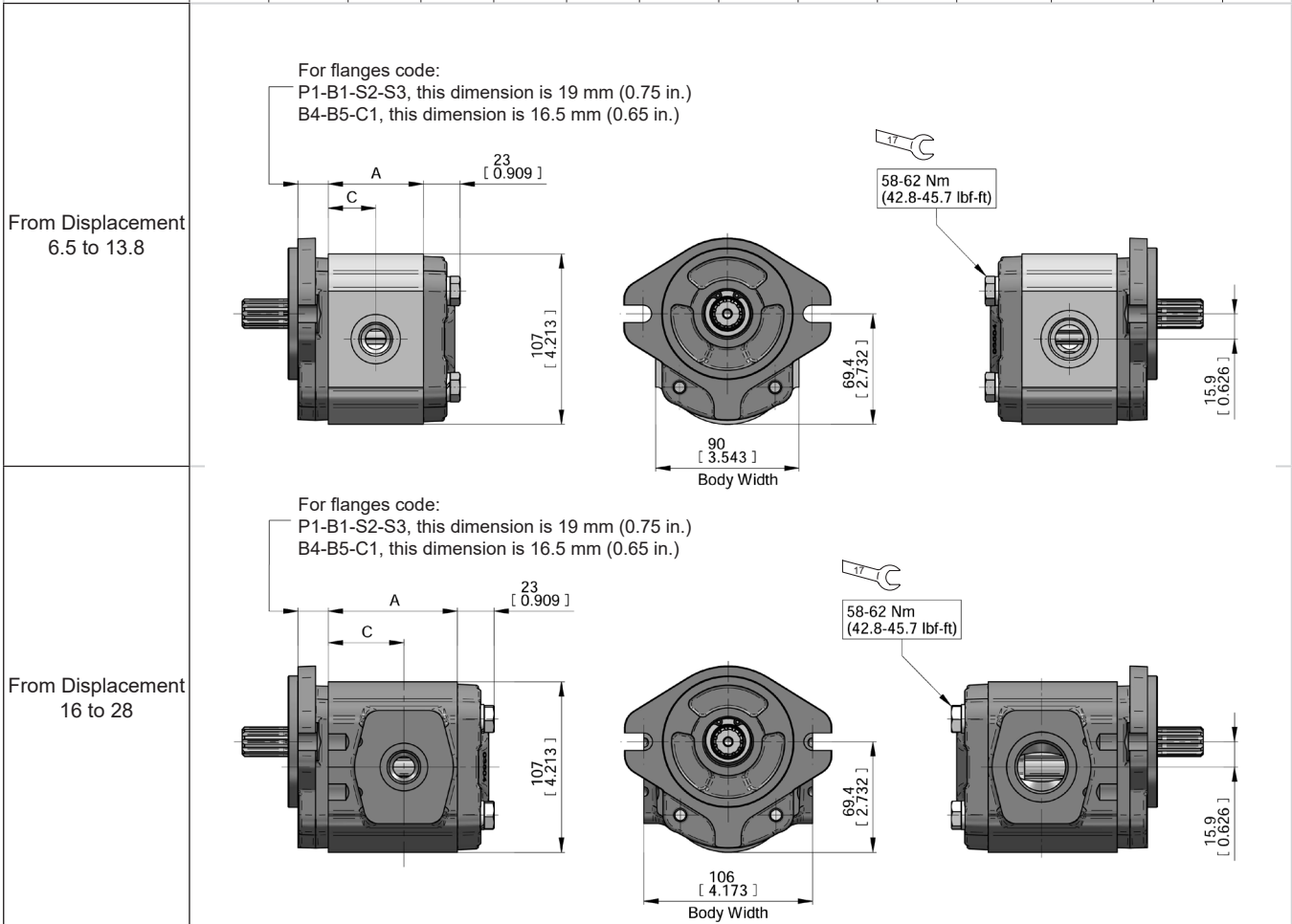


Single Unit



Displacements up to 28 cm³/rev - 1.71 cu.in./rev

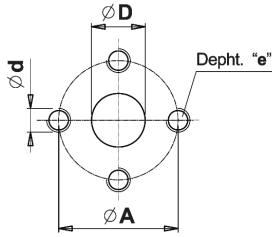
TYPE	Displacement		Dimension A		Dimension C		Max. Continuous pressure p _i		Peak pressure p _s		Min. speed at p _i	Max. speed at p _i	Weight	
	cm ³ /rev	cu.in./rev	mm	in	mm	in	bar	psi	bar	psi	rpm		kg	lbs
2PGSE - 6.5	6.5	0.40	49.95	1.97	25	0.98	300	4350	320	4650	600	4000	4.8	10.58
2PGSE - 8.3	8.3	0.51	52.8	2.07	26.4	1.04	300	4350	320	4650	500	3500	5.0	11.02
2PGSE - 11.3	11.5	0.68	59.7	2.35	29.75	1.17	300	4350	320	4650	500	3500	5.2	11.46
2PGSE - 13.8	14	0.85	63.5	2.50	31.75	1.25	300	4350	320	4650	500	3500	5.4	11.90
2PGSE - 16	16.6	1.01	67.5	2.65	39.5	1.56	300	4350	320	4650	500	3000	6.6	14.55
2PGSE - 19	19.4	1.18	75.6	2.97	39.5	1.56	300	4350	320	4650	500	3000	7.1	15.65
2PGSE - 22.5	22.9	1.37	81	3.19	47.5	1.87	280	4060	300	4350	500	2750	7.5	16.53
2PGSE - 26	26.7	1.63	86.8	3.42	47.5	1.87	260	3750	280	4060	500	2500	7.8	17.20
2PGSE - 28	28.1	1.71	89	3.50	48	1.89	230	3335	250	3625	500	2500	8.0	17.64



E0.149.0226.11.00IM00



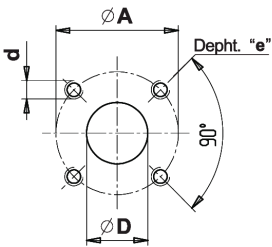
Ports



UNI-DIRECTIONAL								
PUMPS	INLET				OUTLET			
	Ø D	Ø A	d	e	Ø D	Ø A	d	e
From 6.5 to 8.3	13 (0.51")	30 (1.18")	M6	13 (0.51")	13 (0.51")	30 (1.18")	M6	13 (0.51")
From 11.3 to 22.5	20 (0.79")	40 (1.57")	M8	13 (0.51")	13 (0.51")	30 (1.18")	M6	13 (0.51")
From 26 to 28	22 (0.87")							

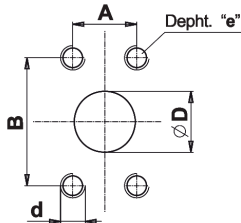
P - European standard

Flanged Ports



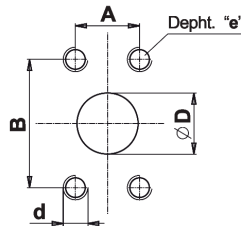
UNI-DIRECTIONAL								
PUMPS	INLET				OUTLET			
	Ø D	Ø A	d	e	Ø D	Ø A	d	e
From 6.5 to 22.5	20 (0.79")	40 (1.57")	M6	13 (0.51")	15 (0.59")	35 (1.38")	M6	13 (0.51")
26	22 (0.87")							
28	25 (0.98")	55 (2.17")	M8	13 (0.51")				

B - German standard



UNI-DIRECTIONAL										
PUMPS	INLET					OUTLET				
	ØD	B	A	d	e	ØD	B	A	d	e
From 16 to 19	19 (0.75")	47.6 (1.87")	22.2 (0.87")	M10	15 (0.59")	12.7 (0.50")	38.1 (1.50")	17.5 (0.69")	M8	15 (0.59")
From 22.5 to 28	25.4 (1.00")	52.4 (2.06")	26.2 (1.03")	M10	15 (0.59")	19 (0.75")	47.6 (1.87")	22.2 (0.87")	M10	15 (0.59")

W - SAE J518
Standard pressure series
3000 psi
Metric thread



UNI-DIRECTIONAL										
PUMPS	INLET					OUTLET				
	ØD	B	A	d	e	ØD	B	A	d	e
From 16 to 19	19 (0.75")	47.6 (1.87")	22.2 (0.87")	3/8-16 UNC	15 (0.59")	12.7 (0.50")	38.1 (1.50")	17.5 (0.69")	5/16-18 UNC	15 (0.59")
From 22.5 to 28	25.4 (1.00")	52.4 (2.06")	26.2 (1.03")	3/8-16 UNC	15 (0.59")	19 (0.75")	47.6 (1.87")	22.2 (0.87")	3/8-16 UNC	15 (0.59")

S - SAE J518 - Standard
pressure series 3000 psi
American standard thread

EO.149.0226.11.001M00



Ports																																																				
Threaded Ports		<table border="1"> <thead> <tr> <th colspan="7">UNI-DIRECTIONAL</th> </tr> <tr> <th>PUMPS</th> <th colspan="3">INLET</th> <th colspan="3">OUTLET</th> </tr> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>From 6.5 to 19</td> <td>G 3/4</td> <td>17 (0.67")</td> <td>18 (0.71")</td> <td rowspan="2">G 1/2</td> <td rowspan="2">15 (0.59")</td> <td rowspan="2">13 (0.79")</td> </tr> <tr> <td>From 22.5 to 28</td> <td>G1</td> <td>20 (0.79")</td> <td>25 (0.98")</td> </tr> </tbody> </table>	UNI-DIRECTIONAL							PUMPS	INLET			OUTLET				A	B	C	A	B	C	From 6.5 to 19	G 3/4	17 (0.67")	18 (0.71")	G 1/2	15 (0.59")	13 (0.79")	From 22.5 to 28	G1	20 (0.79")	25 (0.98")																		
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G - GAS (BSPP)																																																				
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R - SAE (ODT)																																																				



Standard Configurations

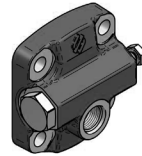
Cover with Rear Ports



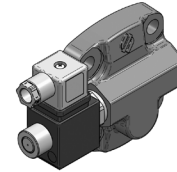
Cover with Valves



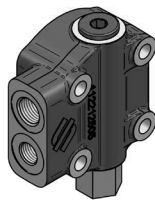
VS
Cover with Pressure relief Valve
Internal discharge



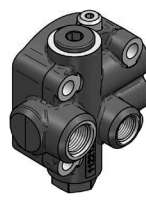
VSE
Cover with Pressure relief Valve
External discharge



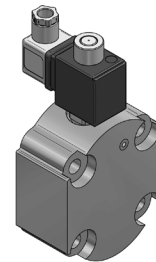
**EV1-EV2
EV3-EV4**
Electric unloading valve



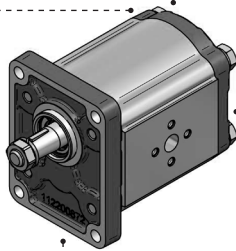
VP/VP1/VPS/VPS1
Cover with Priority Flow Valve



VPD/VPD1/VPDS/VPDS1
Cover with Load Sensing Priority Valve



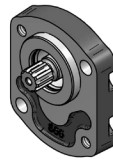
**EVS1-EVS2
EVS3-EVS4**
Pressure relief and electric unloading valves



Mounting configuration (Flanges+Drive Shaft)



03B2/B3
German standard
+
Tang drive for electric motors



62B4/B5
German standard
+
Splined 9T DIN 5482



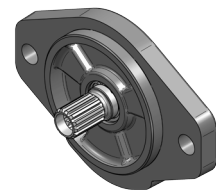
25B1
German standard
+
Tapered 1:5



52S2
SAE A 2 bolts
+
SAE A splined 9T



28P1
European standard
+
Tapered 1:8



55S3
SAE B 2 Bolts
+
SAE B splined 13T

	25B4/B5 German standard + Tapered 1:5	62B1 German standard + Splined 9T DIN 5482	54S2 SAE A 2 bolts + SAE A splined 11T	62P1 European standard + Splined 9T DIN 5482	
			85S2 SAE A 2 bolts + 3/4 SAE A Parallel		
			82S2 SAE A 2 bolts + 5/8 SAE A Parallel		

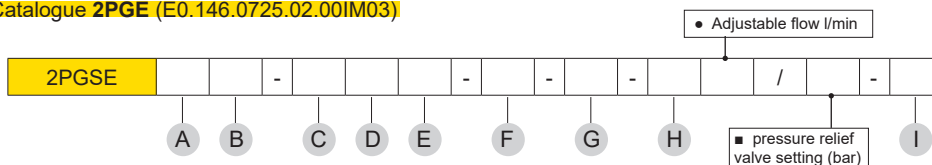
i
for displacements from 6.5 to 13.8
Mounting with coupling sleeve

i
for displacements from 16 to 28
Mounting with solid shaft.
Available on request

EO.149.0226.11.001M00



► See Technical Catalogue 2PGE (E0.146.0725.02.00IM03)



A	CODE	DISPLACEMENTS	
	6.5	6.5 cm ³ /rev.	0.40 cu.in/rev.
	8.3	8.3 cm ³ /rev.	0.51 cu.in/rev.
	11.3	11.5 cm ³ /rev.	0.68 cu.in/rev.
	13.8	14 cm ³ /rev.	0.85 cu.in/rev.
	16	16.6 cm ³ /rev.	1.01 cu.in/rev.
	19	19.4 cm ³ /rev.	1.18 cu.in/rev.
	22.5	22.9 cm ³ /rev.	1.37 cu.in/rev.
	26	26.7 cm ³ /rev.	1.63 cu.in/rev.
	28	28.1 cm ³ /rev.	1.71 cu.in/rev.

B	ROTATION	CODE
	Clockwise	D
	Anti-clockwise	S

C	PORTS	CODE
	Flanged ports european standard	P
	Flanged ports german standard	B
	Flanged ports SAE J518 - standard pressure series 3000 psi - Metric thread	W
	Flanged ports SAE J518 - standard pressure series 3000 psi - American standard thread	S
	Threaded ports GAS (BSPP)	G
	Threaded ports SAE (ODT)	R

D	► DRIVE SHAFT	CODE
	Tang drive for electric motors	03
	Tang drive	04
	Tapered 1:5	25
	Tapered 1:8	28
	SAE A splined 9T	52
	SAE A splined 11T	54
	SAE B splined 13T	55
	9 teeth DIN 5482 splined	62
	DIN 5480 internal splined (only for rear pumps-see page 24)	60
	5/8" SAE A parallel	82
	3/4" SAE A parallel (Mounting face 31.8 mm)	85

E	► MOUNTING FLANGES	CODE
	European standard	P1
	German standard Ø80	B1
	German standard Ø52	B2-B3
	German standard Ø50	B4-B5
	SAE A 2 bolts	S2
	SAE B 2 bolts	S3
	SAE A 2 Bolts (with o-ring on the centering collar)	S6

F	SEAL	CODE
	Buna standard (standard configuration)	-
	Viton	V

G	PORTS LAYOUT	CODE
	Side ports (standard configuration)	-
	Rear ports	1

H	► REAR COVERS	CODE
	Adjustable pressure relief valve-Internal discharge	■ VS
	Adjustable setting pressure relief valve-External discharge	■ VSE
	Priority flow valve with excess flow to 2nd actuator	● VP-VP1
	Priority flow valve with excess flow to 2nd actuator with pressure relief valve	■ ● VPS-VPS1
	Load sensing priority valve with dinamic signal	VPD-VPD1
	Load sensing priority valve with dinamic signal and pressure relief valve	■ VPDS VPDS1
	Electric unloading valve (12V)	EV1/EV3
	Electric unloading valve (24V)	EV2/EV4
	Pressure relief and electric unloading valves (12V)	EVS1/EVS3
	Pressure relief and electric unloading valves (24V)	EVS2/EVS4

I	PAINTING	CODE
	Not painted (standard configuration)	-
	Black painted RAL 9005	BP

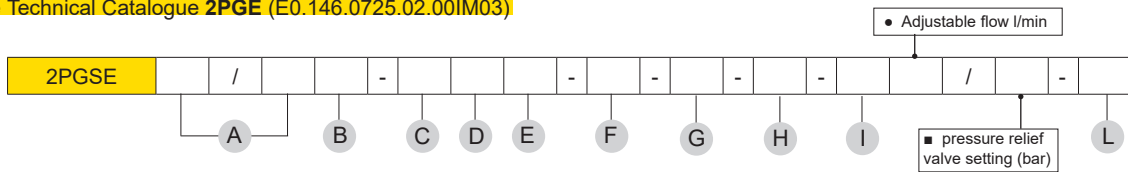
How to order Single Pump

2PGSE, displacement (19), clockwise rotation (D), ports SAE (R), drive shaft (54), mounting flange (S2)= **2PGSE19D-R54S2**

E0.149.0226.11.00IM00



► See Technical Catalogue 2PGE (E0.146.0725.02.00IM03)



A	CODE	DISPLACEMENTS	
	6.5	6.5 cm ³ /rev.	0.40 cu.in/rev.
	8.3	8.3 cm ³ /rev.	0.51 cu.in/rev.
	11.3	11.5 cm ³ /rev.	0.68 cu.in/rev.
	13.8	14 cm ³ /rev.	0.85 cu.in/rev.
	16	16.6 cm ³ /rev.	1.01 cu.in/rev.
	19	19.4 cm ³ /rev.	1.18 cu.in/rev.
	22.5	22.9 cm ³ /rev.	1.37 cu.in/rev.
	26	26.7 cm ³ /rev.	1.63 cu.in/rev.
	28	28.1 cm ³ /rev.	1.71 cu.in/rev.

B	ROTATION	CODE
	Clockwise	D
	Anti-clockwise	S

C	PORTS	CODE
	Flanged ports european standard	P
	Flanged ports german standard	B
	Flanged ports SAE J518 - standard pressure series 3000 psi - Metric thread	W
	Flanged ports SAE J518 - standard pressure series 3000 psi - American standard thread	S
	Threaded ports GAS (BSPP)	G
	Threaded ports SAE (ODT)	R

D	► DRIVE SHAFT	CODE
	Tang drive for electric motors	03
	Tang drive	04
	Tapered 1:5	25
	Tapered 1:8	28
	SAE A splined 9T	52
	SAE A splined 11T	54
	SAE B splined 13T	55
	9 teeth DIN 5482 splined	62
	DIN 5480 internal splined (only for rear pumps-see page 24)	60
	5/8" SAE A parallel	82
	3/4" SAE A parallel (Mounting face 31.8 mm)	85

E	► MOUNTING FLANGES	CODE
	European standard	P1
	German standard Ø80	B1
	German standard Ø52	B2-B3
	German standard Ø50	B4-B5
	SAE A 2 bolts	S2
	SAE B 2 bolts	S3
	SAE A 2 Bolts (with o-ring on the centering collar)	S6

F	SEAL	CODE
	Buna standard (standard configuration)	-
	Viton	V

G	PORTS LAYOUT	CODE
	Side ports (standard configuration)	-
	Rear ports	1

H	INLET PORTS*	CODE
	Separated stages	AS
	Common Inlet	UA

I	► REAR COVERS	CODE
	Adjustable pressure relief valve-Internal discharge	■ VS
	Adjustable setting pressure relief valve-External discharge	■ VSE
	Priority flow valve with excess flow to 2nd actuator	● VP-VP1
	Priority flow valve with excess flow to 2nd actuator with pressure relief valve	■ ● VPS-VPS1
	Load sensing priority valve with dynamic signal	VPD-VPD1
	Load sensing priority valve with dynamic signal and pressure relief valve	■ VPDS VPDS1
	Electric unloading valve (12V)	EV1/EV3
	Electric unloading valve (24V)	EV2/EV4
	Pressure relief and electric unloading valves (12V)	EVS1/EVS3
	Pressure relief and electric unloading valves (24V)	EVS2/EVS4

L	PAINTING	CODE
	Not painted (standard configuration)	-
	Black painted RAL 9005	BP

How to order Multiple pump

2PGSE, displacement first stage (16), displacement second stage (16), clockwise rotation (D), ports European (P), drive shaft (55), mounting flange (S3)= **2PGSE16/16D-P55S3**

i *Inlet Ports:

AS= Separated stages
Pump with separated stages for different fluid (2 tanks).
Number 1, 2 or 3 identify the body where Kit AS is mounted.

UA= Common Inlet
Pump with one inlet port opened, all the other inlet port are closed.
Number 1, 2 or 3 identify the body where inlet port is open.

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SALAMI S.P.A.

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