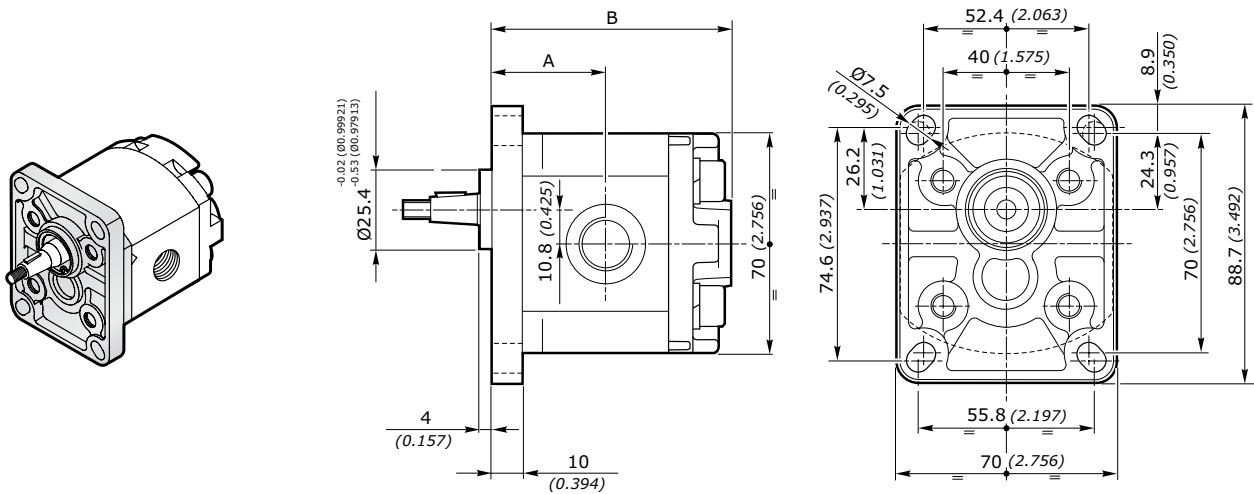


**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**FLANGIA EUROPEA EUR STANDARD FLANGE**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
			P1		P2		P3								
	cm³/giro	in³/rev	bar	psi	bar	psi	bar	psi	giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
<b>1SP 009</b>	0.89	0.05	240	3480	260	3770	290	4205	6000	5.3	1.40	600	0.49	0.13	92*
<b>1SP 012</b>	1.18	0.07	240	3480	260	3770	290	4205	6000	7.1	1.88	600	0.65	0.17	92*
<b>1SP 016</b>	1.6	0.10	240	3480	260	3770	290	4205	6000	9.6	2.54	400	0.61	0.16	95*
<b>1SP 020</b>	2.0	0.12	220	3190	250	3625	270	3915	5500	11	2.91	400	0.76	0.20	95*
<b>1SP 025</b>	2.5	0.15	220	3190	250	3625	270	3915	5000	12.5	3.30	400	0.95	0.25	95*
<b>1SP 032</b>	3.2	0.20	210	3045	240	3480	260	3770	4500	14.4	3.80	400	1.21	0.32	95*
<b>1SP 037</b>	3.7	0.23	210	3045	240	3480	260	3770	4000	14.8	3.91	400	1.40	0.37	95*
<b>1SP 042</b>	4.2	0.26	190	2755	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*
<b>1SP 050</b>	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*
<b>1SP 063</b>	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*
<b>1SP 078</b>	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*
<b>1SP 098</b>	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*

**DIMENSIONI • DIMENSIONS**


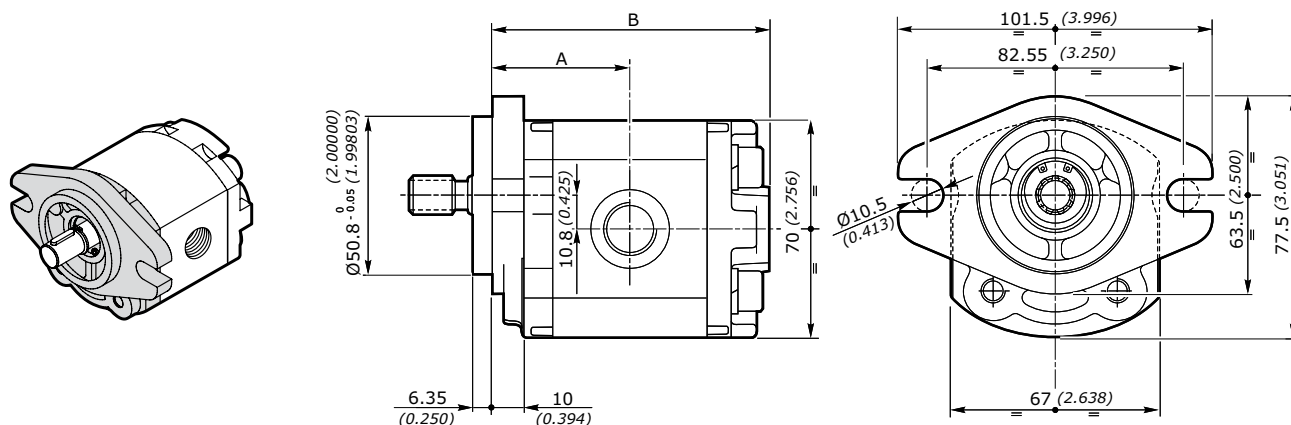
GRUPPO - GROUP 1	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
<b>1SP 009</b>	34.80	1.370	73.6	2.898	0.91	2.01
<b>1SP 012</b>	35.35	1.392	74.7	2.941	0.93	2.05
<b>1SP 016</b>	36.20	1.425	76.4	3.008	0.95	2.09
<b>1SP 020</b>	36.95	1.455	77.9	3.067	0.97	2.14
<b>1SP 025</b>	37.95	1.494	79.9	3.146	1.00	2.21
<b>1SP 032</b>	39.30	1.547	82.6	3.252	1.04	2.29
<b>1SP 037</b>	40.30	1.587	84.6	3.331	1.07	2.36
<b>1SP 042</b>	41.25	1.624	86.5	3.406	1.10	2.43
<b>1SP 050</b>	42.80	1.685	89.6	3.528	1.14	2.51
<b>1SP 063</b>	45.35	1.785	94.7	3.728	1.22	2.69
<b>1SP 078</b>	48.20	1.898	100.4	3.953	1.30	2.87
<b>1SP 098</b>	52.15	2.053	108.3	4.264	1.41	3.11

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**FLANGIA SAE** **SAEAA** **SAE FLANGE**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm <sup>3</sup> /giro	in <sup>3</sup> /rev	P1		P2		P3		giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%
			bar	psi	bar	psi	bar	psi							
<b>1SP 009</b>	0.89	0.05	240	3480	260	3770	290	4205	6000	5.3	1.40	600	0.49	0.13	92*
<b>1SP 012</b>	1.18	0.07	240	3480	260	3770	290	4205	6000	7.1	1.88	600	0.65	0.17	92*
<b>1SP 016</b>	1.6	0.10	240	3480	260	3770	290	4205	6000	9.6	2.54	400	0.61	0.16	95*
<b>1SP 020</b>	2.0	0.12	220	3190	250	3625	270	3915	5500	11	2.91	400	0.76	0.20	95*
<b>1SP 025</b>	2.5	0.15	220	3190	250	3625	270	3915	5000	12.5	3.30	400	0.95	0.25	95*
<b>1SP 032</b>	3.2	0.20	210	3045	240	3480	260	3770	4500	14.4	3.80	400	1.21	0.32	95*
<b>1SP 037</b>	3.7	0.23	210	3045	240	3480	260	3770	4000	14.8	3.91	400	1.40	0.37	95*
<b>1SP 042</b>	4.2	0.26	190	2755	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*
<b>1SP 050</b>	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*
<b>1SP 063</b>	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*
<b>1SP 078</b>	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*
<b>1SP 098</b>	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*

**DIMENSIONI • DIMENSIONS**



GRUPPO - GROUP 1	A		B		MASSA - MASS	
	mm	inch	mm	inch	kg	lbs
<b>1SP 009</b>	38.30	1.508	77.10	3.035	0.91	2.01
<b>1SP 012</b>	38.85	1.530	78.20	3.079	0.93	2.05
<b>1SP 016</b>	39.70	1.563	79.90	3.146	0.95	2.09
<b>1SP 020</b>	40.45	1.593	81.40	3.205	0.97	2.14
<b>1SP 025</b>	41.45	1.632	83.40	3.283	1.00	2.21
<b>1SP 032</b>	42.80	1.685	86.10	3.390	1.04	2.29
<b>1SP 037</b>	43.80	1.724	88.10	3.469	1.07	2.36
<b>1SP 042</b>	44.75	1.762	90.00	3.543	1.10	2.43
<b>1SP 050</b>	46.30	1.823	93.10	3.665	1.14	2.51
<b>1SP 063</b>	48.85	1.923	98.20	3.866	1.22	2.69
<b>1SP 078</b>	51.70	2.035	103.90	4.091	1.30	2.87
<b>1SP 098</b>	55.65	2.191	111.80	4.402	1.41	3.11

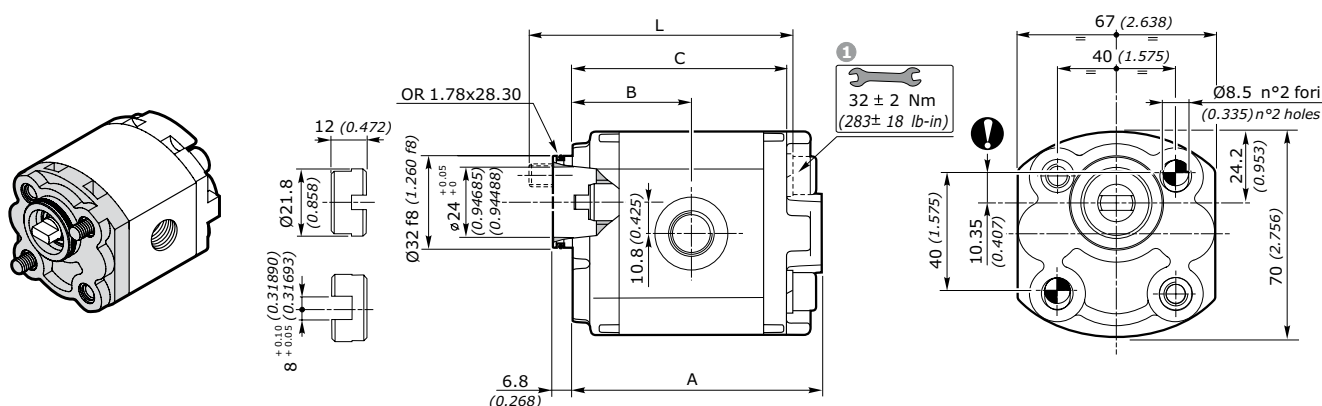


**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**FLANGIA TEDESCA FISSAGGIO MINICENTRALINA E32BX POWER-PACK FIXING GERMAN FLANGE**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED	PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED	PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm <sup>3</sup> /giro	in <sup>3</sup> /rev	P1		P2		P3			l/min	Gal/min		l/min	Gal/min	
			bar	psi	bar	psi	bar	psi	giri/min - rpm			%			
1SP 009	0.89	0.05	210	3045	240	3480	260	3770	6000	5.3	1.40	600	0.49	0.13	92*
1SP 012	1.18	0.07	210	3045	240	3480	260	3770	6000	7.1	1.88	600	0.65	0.17	92*
1SP 016	1.6	0.10	210	3045	240	3480	260	3770	6000	9.6	2.54	400	0.61	0.16	95*
1SP 020	2.0	0.12	210	3045	240	3480	260	3770	5500	11	2.91	400	0.76	0.20	95*
1SP 025	2.5	0.15	210	3045	240	3480	260	3770	5000	12.5	3.30	400	0.95	0.25	95*
1SP 032	3.2	0.20	200	2900	230	3335	250	3625	4500	14.4	3.80	400	1.21	0.32	95*
1SP 037	3.7	0.23	200	2900	230	3335	250	3625	4000	14.8	3.91	400	1.40	0.37	95*
1SP 042	4.2	0.26	180	2610	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*
1SP 050	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*
1SP 063	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*
1SP 078	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*
1SP 098	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*

**DIMENSIONI • DIMENSIONS**



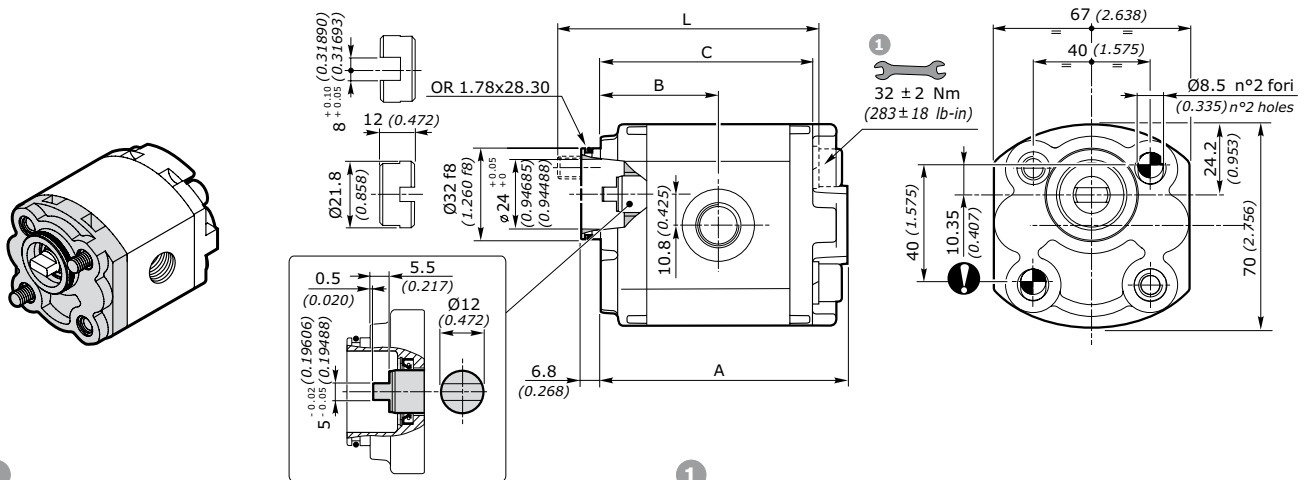
1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)  
Il kit viti per il fissaggio della pompa è da ordinare separatamente.  
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)  
Il fissaggio della pompa può essere effettuato con 2 viti prigioniere (25 ± 2Nm).  
Fissare la pompa mediante dadi autobloccanti (32 ± 2 Nm).

1 Screw tightening torque: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).  
The screw kit for the pump assembly should be ordered separately.  
Ordering code: **0019W** (+ length **L** - see table)  
The pump assembling should be made by 2 screws (221 ± 18 lb-in).  
Fix the pump by self-locking nuts (283 ± 18 lb-in).

GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SP 009	73.6	2.898	34.80	1.370	61.6	2.425	80	3.150	0.91	2.01
1SP 012	74.7	2.941	35.35	1.392	62.7	2.469	80	3.150	0.93	2.05
1SP 016	76.4	3.008	36.20	1.425	64.4	2.535	80	3.150	0.95	2.09
1SP 020	77.9	3.067	36.95	1.455	65.9	2.594	80	3.150	0.97	2.14
1SP 025	79.9	3.146	37.95	1.494	67.9	2.673	85	3.346	1.00	2.21
1SP 032	82.6	3.252	39.30	1.547	70.6	2.780	85	3.346	1.04	2.29
1SP 037	84.6	3.331	40.30	1.587	72.6	2.858	90	3.543	1.07	2.36
1SP 042	86.5	3.406	41.25	1.624	74.5	2.933	90	3.543	1.10	2.43
1SP 050	89.6	3.528	42.80	1.685	77.6	3.055	95	3.740	1.14	2.51
1SP 063	94.7	3.728	45.35	1.785	82.7	3.256	100	3.937	1.22	2.69
1SP 078	100.4	3.953	48.20	1.898	88.4	3.480	105	4.134	1.30	2.87
1SP 098	108.3	4.264	52.15	2.053	96.3	3.791	115	4.528	1.41	3.11

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**FLANGIA TEDESCA FISSAGGIO MINICENTRALINA  
 CON ANELLO DI TENUTA**
**E32BC**
**POWER-PACK FIXING GERMAN FLANGE  
 WITH SEAL SHAFT**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED		PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED		PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm <sup>3</sup> /giro	in <sup>3</sup> /rev	P1		P2		P3		giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min			
			bar	psi	bar	psi	bar	psi									
1SP 009	0.89	0.05	210	3045	240	3480	260	3770	6000	5.3	1.40	600	0.49	0.13	92*		
1SP 012	1.18	0.07	210	3045	240	3480	260	3770	6000	7.1	1.88	600	0.65	0.17	92*		
1SP 016	1.6	0.10	210	3045	240	3480	260	3770	6000	9.6	2.54	400	0.61	0.16	95*		
1SP 020	2.0	0.12	210	3045	240	3480	260	3770	5500	11	2.91	400	0.76	0.20	95*		
1SP 025	2.5	0.15	210	3045	240	3480	260	3770	5000	12.5	3.30	400	0.95	0.25	95*		
1SP 032	3.2	0.20	200	2900	230	3335	250	3625	4500	14.4	3.80	400	1.21	0.32	95*		
1SP 037	3.7	0.23	200	2900	230	3335	250	3625	4000	14.8	3.91	400	1.40	0.37	95*		
1SP 042	4.2	0.26	180	2610	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*		
1SP 050	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*		
1SP 063	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*		
1SP 078	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*		
1SP 098	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*		

**DIMENSIONI • DIMENSIONS**


1 Coppia di serraggio viti:  $32 \pm 2$  Nm (viti classe 10.9-12.9 UNI EN 20898/1)  
 Il kit viti per il fissaggio della pompa è da ordinare separatamente.  
 Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)

Il fissaggio della pompa può essere effettuato con 2 viti prigioniere ( $25 \pm 2$  Nm).  
 Fissare la pompa mediante dadi autobloccanti ( $32 \pm 2$  Nm).

1 Screw tightening torque:  $283 \pm 18$  lb-in (screws 10.9-12.9 UNI EN 20898/1).  
 The screw kit for the pump assembly should be ordered separately.  
 Ordering code: **0019W** (+ length **L** - see table)

The pump assembling should be made by 2 screws ( $221 \pm 18$  lb-in).  
 Fix the pump by self-locking nuts ( $283 \pm 18$  lb-in).

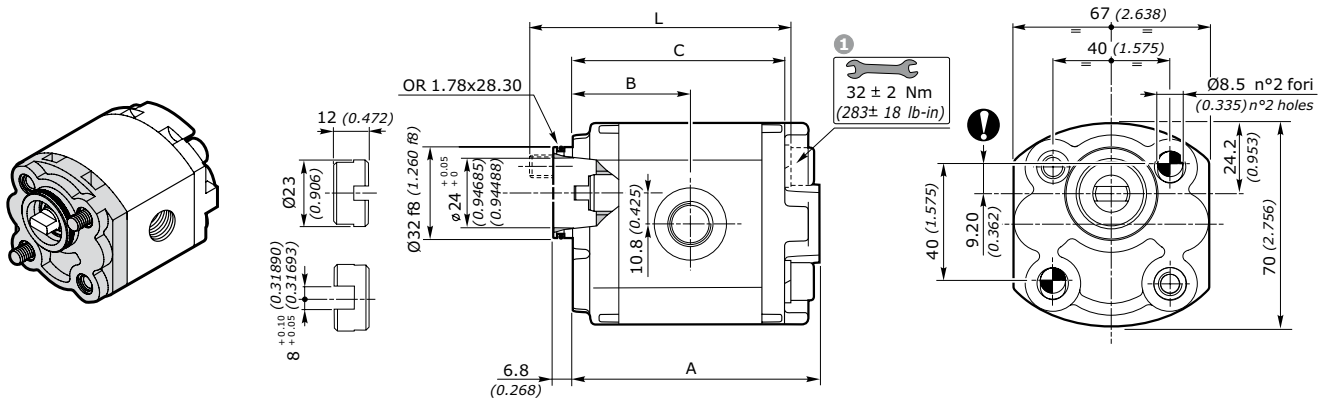
GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SP 009	73.6	2.898	34.80	1.370	61.6	2.425	80	3.150	0.91	2.01
1SP 012	74.7	2.941	35.35	1.392	62.7	2.469	80	3.150	0.93	2.05
1SP 016	76.4	3.008	36.20	1.425	64.4	2.535	80	3.150	0.95	2.09
1SP 020	77.9	3.067	36.95	1.455	65.9	2.594	80	3.150	0.97	2.14
1SP 025	79.9	3.146	37.95	1.494	67.9	2.673	85	3.346	1.00	2.21
1SP 032	82.6	3.252	39.30	1.547	70.6	2.780	85	3.346	1.04	2.29
1SP 037	84.6	3.331	40.30	1.587	72.6	2.858	90	3.543	1.07	2.36
1SP 042	86.5	3.406	41.25	1.624	74.5	2.933	90	3.543	1.10	2.43
1SP 050	89.6	3.528	42.80	1.685	77.6	3.055	95	3.740	1.14	2.51
1SP 063	94.7	3.728	45.35	1.785	82.7	3.256	100	3.937	1.22	2.69
1SP 078	100.4	3.953	48.20	1.898	88.4	3.480	105	4.134	1.30	2.87
1SP 098	108.3	4.264	52.15	2.053	96.3	3.791	115	4.528	1.41	3.11

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**FLANGIA PER ELETTROPOMPA E32CX ELECTRO-PUMP FLANGE**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED		PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED		PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm³/giro	in³/rev	P1		P2		P3		giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min	%		
			bar	psi	bar	psi	bar	psi									
1SP 009	0.89	0.05	210	3045	240	3480	260	3770	6000	5.3	1.40	600	0.49	0.13	92*		
1SP 012	1.18	0.07	210	3045	240	3480	260	3770	6000	7.1	1.88	600	0.65	0.17	92*		
1SP 016	1.6	0.10	210	3045	240	3480	260	3770	6000	9.6	2.54	400	0.61	0.16	95*		
1SP 020	2.0	0.12	210	3045	240	3480	260	3770	5500	11	2.91	400	0.76	0.20	95*		
1SP 025	2.5	0.15	210	3045	240	3480	260	3770	5000	12.5	3.30	400	0.95	0.25	95*		
1SP 032	3.2	0.20	200	2900	230	3335	250	3625	4500	14.4	3.80	400	1.21	0.32	95*		
1SP 037	3.7	0.23	200	2900	230	3335	250	3625	4000	14.8	3.91	400	1.40	0.37	95*		
1SP 042	4.2	0.26	180	2610	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*		
1SP 050	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*		
1SP 063	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*		
1SP 078	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*		
1SP 098	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*		

**DIMENSIONI • DIMENSIONS**



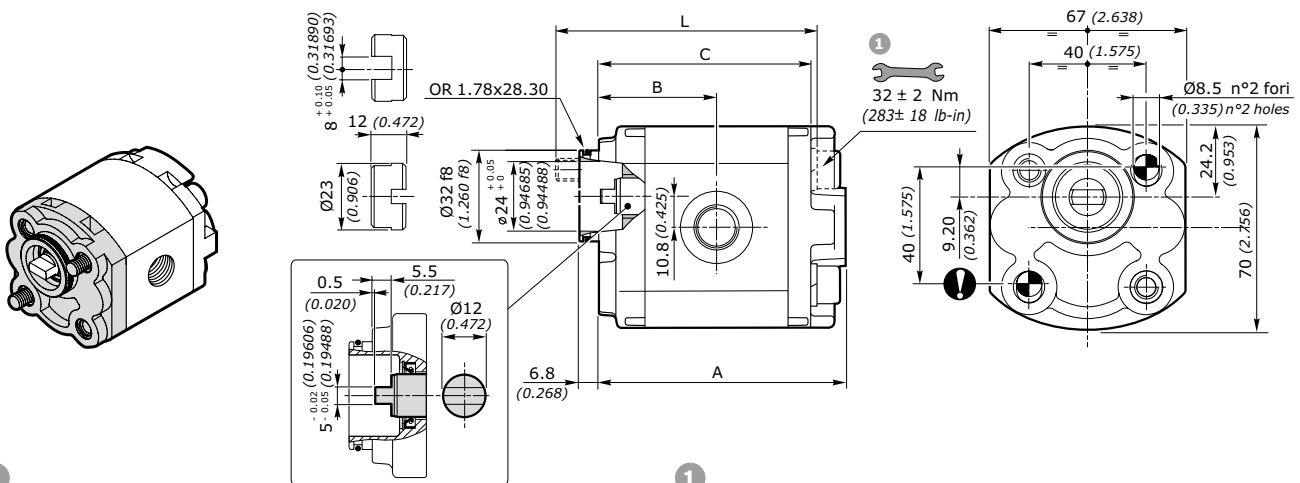
1 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)  
Il kit viti per il fissaggio della pompa è da ordinare separatamente.  
Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)  
Il fissaggio della pompa può essere effettuato con 2 viti prigioniere (25 ± 2Nm).  
Fissare la pompa mediante dadi autobloccanti (32 ± 2 Nm).

1 Screw tightening torque: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).  
The screw kit for the pump assembly should be ordered separately.  
Ordering code: **0019W** (+ length **L** - see table)  
The pump assembling should be made by 2 screws (221 ± 18 lb-in).  
Fix the pump by self-locking nuts (283 ± 18 lb-in).

GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SP 009	73.6	2.898	34.80	1.370	61.6	2.425	80	3.150	0.91	2.01
1SP 012	74.7	2.941	35.35	1.392	62.7	2.469	80	3.150	0.93	2.05
1SP 016	76.4	3.008	36.20	1.425	64.4	2.535	80	3.150	0.95	2.09
1SP 020	77.9	3.067	36.95	1.455	65.9	2.594	80	3.150	0.97	2.14
1SP 025	79.9	3.146	37.95	1.494	67.9	2.673	85	3.346	1.00	2.21
1SP 032	82.6	3.252	39.30	1.547	70.6	2.780	85	3.346	1.04	2.29
1SP 037	84.6	3.331	40.30	1.587	72.6	2.858	90	3.543	1.07	2.36
1SP 042	86.5	3.406	41.25	1.624	74.5	2.933	90	3.543	1.10	2.43
1SP 050	89.6	3.528	42.80	1.685	77.6	3.055	95	3.740	1.14	2.51
1SP 063	94.7	3.728	45.35	1.785	82.7	3.256	100	3.937	1.22	2.69
1SP 078	100.4	3.953	48.20	1.898	88.4	3.480	105	4.134	1.30	2.87
1SP 098	108.3	4.264	52.15	2.053	96.3	3.791	115	4.528	1.41	3.11

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**FLANGIA PER ELETTROPOMPA  
 CON ANELLO DI TENUTA**
**E32CC**
**ELECTRO-PUMP FLANGE  
 WITH SEAL SHAFT**

GRUPPO GROUP 1SP	CILINDRATA DISPLACEMENT		PRESSIONE MAX - MAX PRESSURE						VELOCITÀ MAX MAX SPEED		PORTATA MAX MAX FLOW		VELOCITÀ MIN MIN SPEED		PORTATA MIN MIN FLOW		RENDIMENTO VOLUMETRICO MIN. MIN. VOLUMETRIC EFFICIENCY
	cm <sup>3</sup> /giro	in <sup>3</sup> /rev	P1		P2		P3		giri/min - rpm	l/min	Gal/min	giri/min - rpm	l/min	Gal/min			
			bar	psi	bar	psi	bar	psi									
1SP 009	0.89	0.05	210	3045	240	3480	260	3770	6000	5.3	1.40	600	0.49	0.13	92*		
1SP 012	1.18	0.07	210	3045	240	3480	260	3770	6000	7.1	1.88	600	0.65	0.17	92*		
1SP 016	1.6	0.10	210	3045	240	3480	260	3770	6000	9.6	2.54	400	0.61	0.16	95*		
1SP 020	2.0	0.12	210	3045	240	3480	260	3770	5500	11	2.91	400	0.76	0.20	95*		
1SP 025	2.5	0.15	210	3045	240	3480	260	3770	5000	12.5	3.30	400	0.95	0.25	95*		
1SP 032	3.2	0.20	200	2900	230	3335	250	3625	4500	14.4	3.80	400	1.21	0.32	95*		
1SP 037	3.7	0.23	200	2900	230	3335	250	3625	4000	14.8	3.91	400	1.40	0.37	95*		
1SP 042	4.2	0.26	180	2610	210	3045	230	3335	3500	14.7	3.88	400	1.60	0.42	95*		
1SP 050	5.0	0.31	180	2610	210	3045	230	3335	3000	15	3.96	400	1.90	0.50	95*		
1SP 063	6.3	0.38	170	2465	190	2755	210	3045	2700	17	4.49	400	2.39	0.63	95*		
1SP 078	7.76	0.47	170	2465	190	2755	210	3045	2500	19.4	5.13	400	2.95	0.78	95*		
1SP 098	9.78	0.60	150	2175	170	2465	190	2755	2000	19.6	5.18	400	3.71	0.98	95*		

**DIMENSIONI • DIMENSIONS**


1  
 Coppia di serraggio viti: 32 ± 2Nm (viti classe 10.9-12.9 UNI EN 20898/1)  
 Il kit viti per il fissaggio della pompa è da ordinare separatamente.  
 Codice di ordinazione: **0019W** (+ lunghezza **L** - vedi tabella)  
 Il fissaggio della pompa può essere effettuato con 2 viti prigioniere (25 ± 2Nm).  
 Fissare la pompa mediante dadi autobloccanti (32 ± 2 Nm).

1  
 Screw tightening torque: 283 ± 18 lb-in (screws 10.9-12.9 UNI EN 20898/1).  
 The screw kit for the pump assembly should be ordered separately.  
 Ordering code: **0019W** (+ length **L** - see table)  
 The pump assembling should be made by 2 screws (221 ± 18 lb-in).  
 Fix the pump by self-locking nuts (283 ± 18 lb-in).

GRUPPO - GROUP 1	A		B		C		L 1		MASSA - MASS	
	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
1SP 009	73.6	2.898	34.80	1.370	61.6	2.425	80	3.150	0.91	2.01
1SP 012	74.7	2.941	35.35	1.392	62.7	2.469	80	3.150	0.93	2.05
1SP 016	76.4	3.008	36.20	1.425	64.4	2.535	80	3.150	0.95	2.09
1SP 020	77.9	3.067	36.95	1.455	65.9	2.594	80	3.150	0.97	2.14
1SP 025	79.9	3.146	37.95	1.494	67.9	2.673	85	3.346	1.00	2.21
1SP 032	82.6	3.252	39.30	1.547	70.6	2.780	85	3.346	1.04	2.29
1SP 037	84.6	3.331	40.30	1.587	72.6	2.858	90	3.543	1.07	2.36
1SP 042	86.5	3.406	41.25	1.624	74.5	2.933	90	3.543	1.10	2.43
1SP 050	89.6	3.528	42.80	1.685	77.6	3.055	95	3.740	1.14	2.51
1SP 063	94.7	3.728	45.35	1.785	82.7	3.256	100	3.937	1.22	2.69
1SP 078	100.4	3.953	48.20	1.898	88.4	3.480	105	4.134	1.30	2.87
1SP 098	108.3	4.264	52.15	2.053	96.3	3.791	115	4.528	1.41	3.11

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**CODICE ORDINAZIONE • ORDER CODE**

**1SP - A - 020 - D - EUR - B - N - 10 - 0 - G**

SIGLA - CODE	TIPO - TYPE	DESCRIZIONE - DESCRIPTION	PAGINA - PAGE
<b>1SP</b>	Tipo pompa <i>Pump type</i>	Pompa singola - gruppo 1 <i>Single pump - group 1</i>	4
<b>A</b>	Materiale flangia e coperchio <i>Flange and cover material</i>	<b>A</b> = alluminio / <i>aluminium</i>	
<b>020</b>	Cilindrata <i>Displacement</i>	Cilindrata = 2 cm <sup>3</sup> /giro <i>Displacement = 0.12 in<sup>3</sup>/rev</i>	4
<b>D</b>	Senso di rotazione <i>Rotation wise</i>	<b>D</b> = Rotazione destra / <i>Clockwise rotation</i> <b>S</b> = Rotazione sinistra / <i>Anticlockwise rotation</i>	8
<b>EUR</b>	Tipo Flangia <i>Flange type</i>	Flangia europea standard <i>Standard European flange</i>	
<b>B</b>	Tipo anello di tenuta <i>Seal ring type</i>	Vedi tabella compatibilità <i>See compatibility table</i>	26
<b>N</b>	Tipo guarnizione <i>Gasket type</i>	<b>N</b> = NBR <b>V</b> = Viton	
<b>10</b>	Tipo Albero <i>Shaft type</i>	Vedi tabella compatibilità <i>See compatibility table</i>	27
<b>0</b>	Posizione connessione <i>Connection position</i>	Vedi tabella compatibilità <i>See compatibility table</i>	
<b>G</b>	Tipo connessione <i>Connection type</i>	Vedi tabella compatibilità <i>See compatibility table</i>	30



**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**TIPOLOGIA FLANGIA • FLANGE TYPE**

	EUR	SAEAA	MC32	E32BX - E32BC	E32CX - E32CC
<b>1SP</b>					
<b>A</b> alluminio aluminium	◇	◇	◇	◇	◇
<b>G</b> ghisa cast iron	non disponibile not available	non disponibile not available	non disponibile not available	non disponibile not available	non disponibile not available

 ◇ = Combinazione standard - *Standard combination*
**ANELLO DI TENUTA • SEAL RING**

SIGLA - CODE	TIPO - TYPE	DESCRIZIONE - DESCRIPTION
<b>A</b>	Flangia senza anello di tenuta <i>Flange without seal ring</i>	
<b>B</b>	Anello di tenuta fino a <b>3</b> bar <i>Sealing ring up to 3 bar</i>	Per bassissime pressioni <i>For very low pressure</i>
<b>H</b>	Anello di tenuta fino a <b>8</b> bar <i>Sealing ring up to 8 bar</i>	Per basse pressioni ( con distanziale di rinforzo ) <i>For low pressure (with stiffening seal)</i>
<b>K</b>	Anello di tenuta fino a <b>30</b> bar <i>Sealing ring up to 30 bar</i>	Per alte pressioni <i>For high pressure</i>

**COMBINAZIONE FLANGIA - ANELLO DI TENUTA - GUARNIZIONE • FLANGE - SEAL RING - GASKET COMBINATION**

<b>1SP</b>	EUR	SAEAA	MC32	E32BX	E32BC	E32CX	E32CC						
	Anello - seal ring	Anello - seal ring	Anello - seal ring	Anello - seal ring	Anello - seal ring	Anello - seal ring	Anello - seal ring						
	B	H	K	B	H	K	A	B	K	A	B	K	
NBR <b>N</b>	◇	◇	◇	◇	◇	◇	◇	◇	◇	●	◇	◇	●
Viton <b>V</b>	●	●	●	●	●	●	●	●	●	●	●	●	●

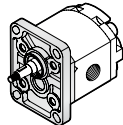
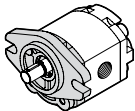
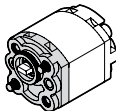
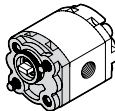
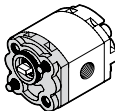
 ◇ = Combinazione standard - *Standard combination*

 ● = Combinazione disponibile - *Available combination*

 esempio • example: **1SP - A - 020 - D - EUR - B - N - 10 - 0 - G**
**EUR** = Flangia europea / *European flange*
**B** = Anello tenuta fino a 3 bar / *Seal ring up to 3 bar*
**N** = Guarnizione in NBR / *NBR o-ring*

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**COMBINAZIONE ALBERO - FLANGIA • SHAFT - FLANGE COMBINATION**

<b>1SP</b>	EUR	SAEAA	MC32	E32BX-E32BC	E32CX-E32CC
					
<b>10</b> Conico 1:8 <i>Tapered 1:8</i>	◆	●	●		
<b>11</b> Conico 1:5 <i>Tapered 1:5</i>	●	●	●		
<b>13</b> Cilindrico SAEAA <i>Parallel shaft SAEAA</i>	●	◆			
<b>14</b> Scanalato SAEAA 9T <i>SAEAA 9T splined</i>	●	◆			
<b>15</b> Scanalato DIN 5480 6T 12x9 <i>DIN 5480 Splined</i>	●	●	●		
<b>17</b> Fresato a dente frontale <i>Dihedral claw</i>				◆	◆
<b>27</b> Fresato a dente frontale (con anello) <i>Dihedral claw (with sealing ring)</i>	●	●	◆		

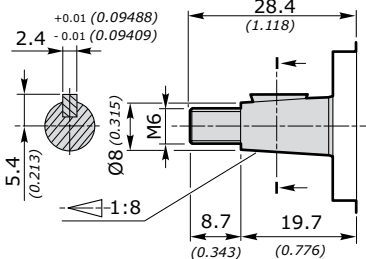
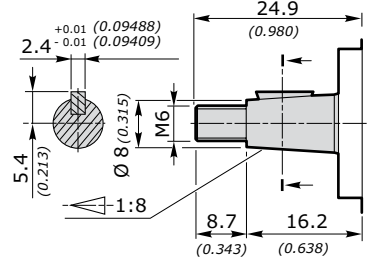
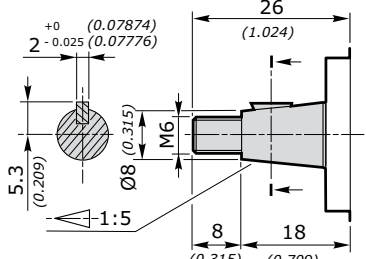
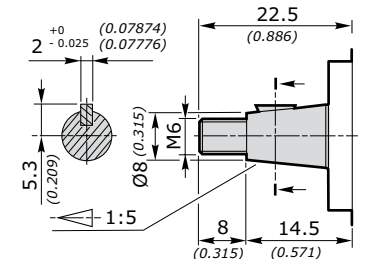
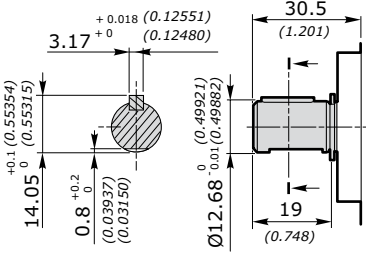
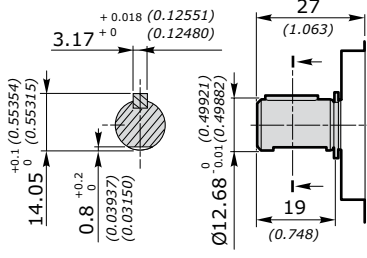
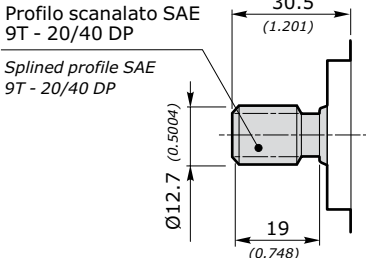
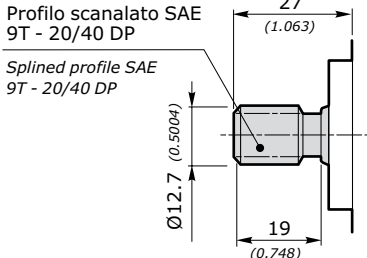
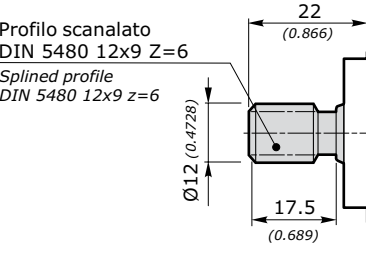
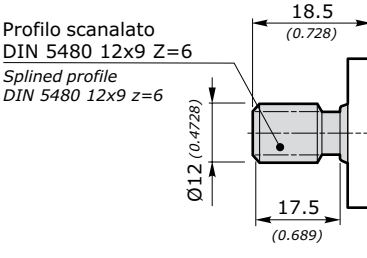
◆ = Combinazione standard - *Standard combination*

● = Combinazione disponibile - *Available combination*

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

**1SP**

DIMENSIONI ALBERO - SHAFT DIMENSIONS

<p><b>10</b> Conico 1:8 Tapered 1:8</p> <p>Coppia 30 Nm Torque 22 ft-lbs</p>	 <p>Disponibile per - available for: <b>EUR - MC32</b></p>	 <p>Disponibile per - available for: <b>SAEAA</b></p>
<p><b>11</b> Conico 1:5 Tapered 1:5</p> <p>Coppia 30 Nm Torque 22 ft-lbs</p>	 <p>Disponibile per - available for: <b>EUR - MC32</b></p>	 <p>Disponibile per - available for: <b>SAEAA</b></p>
<p><b>13</b> Cilindrico SAEAA Parallel shaft SAEAA</p> <p>Coppia 35 Nm Torque 26 ft-lbs</p>	 <p>Disponibile per - available for: <b>EUR</b></p>	 <p>Disponibile per - available for: <b>SAEAA</b></p>
<p><b>14</b> Scanalato SAEAA 9T SAEAA 9T splined</p> <p>Coppia 40 Nm Torque 30 ft-lbs</p>	<p>Profilo scanalato SAE 9T - 20/40 DP</p> <p>Splined profile SAE 9T - 20/40 DP</p>  <p>Disponibile per - available for: <b>EUR</b></p>	<p>Profilo scanalato SAE 9T - 20/40 DP</p> <p>Splined profile SAE 9T - 20/40 DP</p>  <p>Disponibile per - available for: <b>SAEAA</b></p>
<p><b>15</b> Scanalato DIN 5480 6T 12x9 DIN 5480 splined</p> <p>Coppia 30 Nm Torque 22 ft-lbs</p>	<p>Profilo scanalato DIN 5480 12x9 Z=6</p> <p>Splined profile DIN 5480 12x9 z=6</p>  <p>Disponibile per - available for: <b>EUR - MC32</b></p>	<p>Profilo scanalato DIN 5480 12x9 Z=6</p> <p>Splined profile DIN 5480 12x9 z=6</p>  <p>Disponibile per - available for: <b>SAEAA</b></p>

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

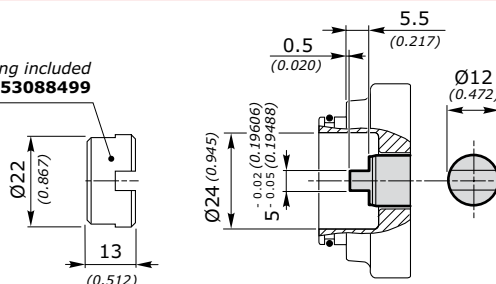
**1SP**

DIMENSIONI ALBERO - SHAFT DIMENSIONS

**17**  
 Fresato  
 a dente frontale  
*Dihedral claw*

Coppia 25 Nm  
 Torque 19 ft-lbs

Giunto incluso - Coupling included  
 Codice - Code: **010453088499**

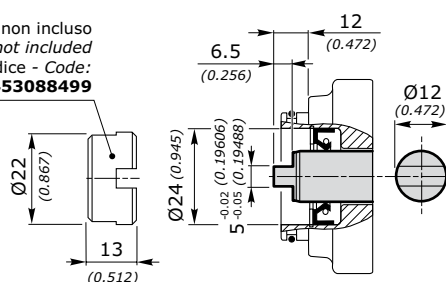


Disponibile per - available for: **E32BX - E32BC - E32CX - E32CC**

**27**  
 Fresato  
 a dente frontale  
 (con anello)  
*Dihedral claw*  
 (with sealing ring)

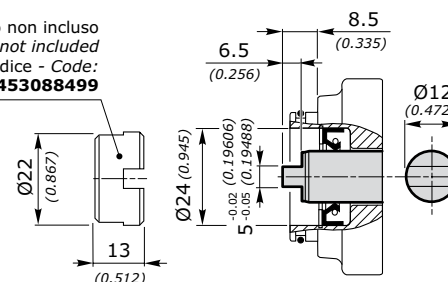
Coppia 25 Nm  
 Torque 19 ft-lbs

Giunto non incluso  
 Coupling not included  
 Codice - Code:  
**010453088499**



Disponibile per - available for: **EUR - MC32**

Giunto non incluso  
 Coupling not included  
 Codice - Code:  
**010453088499**



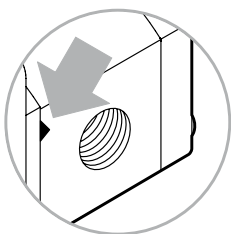
Disponibile per - available for: **SAEAA**

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**POSIZIONE CONNESSIONE • CONNECTION POSITION**

 Rotazione destra - **D**  
 Clockwise rotation - **D**

 Rotazione sinistra - **S**  
 Anti-clockwise rotation - **S**

0	1	3	4	2 (per - for MC32)	5 (per - for MC32)


 Il segno del corpo indica il lato aspirazione per le pompe  
 The sign on the body identifies the suction side for the pumps

**IN = ASPIRAZIONE - SUCTION**  
**OUT = MANDATA - DELIVERY**
**TIPO CONNESSIONE • CONNECTION TYPE**

 Le connessioni rappresentate corrispondono alle versioni standard; per connessioni differenti, contattare il nostro Ufficio Commerciale. *The connection types shown correspond to standard configurations; for different applications contact our Commercial Dept.*

<b>1SP</b>		POSIZIONE CONNESSIONE - CONNECTION POSITION					
		0	1	3	4	2	5
GAS	<b>G</b>	◇	◇	◇	◇	◇	◇
UNF	<b>U</b>	◇	◇	◇	◇	◇	◇
FLANGIATE	<b>T</b>	◇				◇	
FLANGED	<b>N</b>	◇				◇	

<b>GAS</b>	UNI ISO 228/1	SIGLA CODE	CIL. DISPL.	ASPIRAZIONE - SUCTION IN			MANDATA - DELIVERY OUT		
				A	B		A	B	
		<b>G</b>	009	G 3/8"	14 [mm] 0.552 [inch]	40 [Nm] 354 [in.lbs]	G 3/8"	14 [mm] 0.552 [inch]	40 [Nm] 354 [in.lbs]
			012						
			016						
			020						
			025						
			032						
			037						
			042						
			050						
			063						
			078						
098									

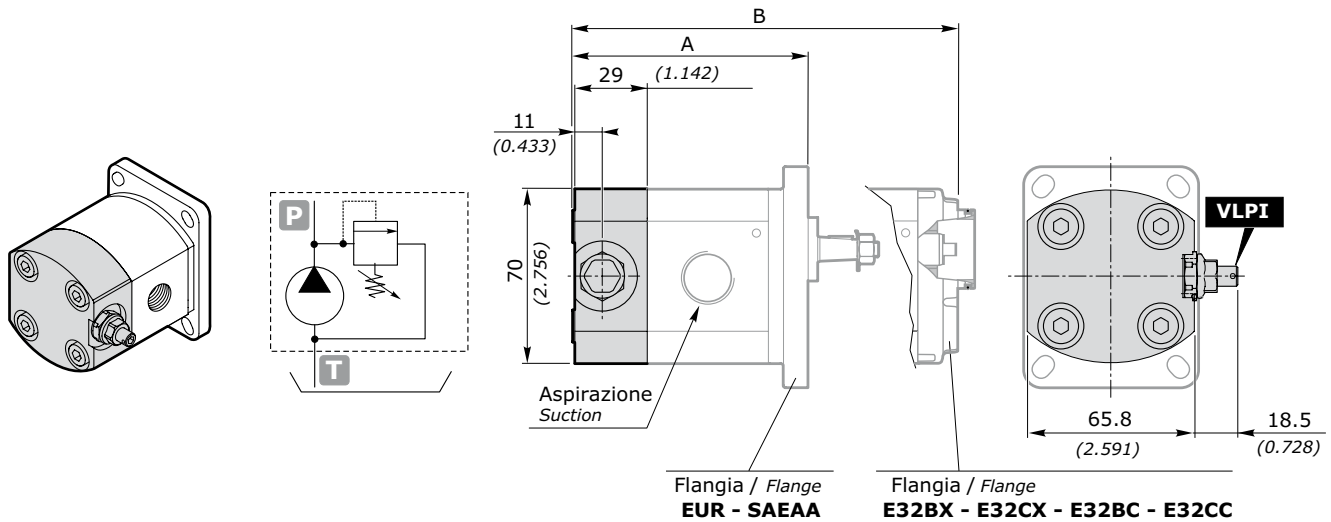
**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

UNF	ANSI/ASME B1.1	SIGLA CODE	CIL. DISPL.	ASPIRAZIONE - SUCTION IN			MANDATA - DELIVERY OUT		
				A	B		A	B	
		<b>U</b>	009	SAE 6 9/16"-18 UNF	13 [mm] 0.512 [inch]	40 [Nm] 354 [in.lbs]	SAE 6 9/16"-18 UNF	13 [mm] 0.512 [inch]	40 [Nm] 354 [in.lbs]
			012						
			016						
			020						
			025	SAE 8 3/4"-14 UNF	15 [mm] 0.591 [inch]	50 [Nm] 443 [in.lbs]	SAE 8 3/4"-14 UNF	15 [mm] 0.591 [inch]	50 [Nm] 443 [in.lbs]
			032						
			037						
			042						
			050						
			063						
			078						
			098						

FLANGIATE FLANGED	ISO/R 262	SIGLA CODE	CIL. DISPL.	ASPIRAZIONE - SUCTION IN					MANDATA - DELIVERY OUT				
				A	B	C	D		A	B	C	D	
		<b>T</b>	009	12 [mm] 0.472 [inch]	30 [mm] 1.181 [inch]	M6	13 [mm] 0.512 [inch]	8 [Nm] 71 [in.lbs]	12 [mm] 0.472 [inch]	30 [mm] 1.181 [inch]	M6	13 [mm] 0.512 [inch]	8 [Nm] 71 [in.lbs]
			012										
			016										
			020										
			025										
			032										
			037										
			042										
			050										
			063										
078													
098													

		<b>N</b>	009	10 [mm] 0.394 [inch]	26 [mm] 1.024 [inch]	M5	11 [mm] 0.433 [inch]	7 [Nm] 62 [in.lbs]	10 [mm] 0.394 [inch]	26 [mm] 1.024 [inch]	M5	11 [mm] 0.433 [inch]	7 [Nm] 62 [in.lbs]
			012										
			016										
			020										
			025	13 [mm] 0.512 [inch]	30 [mm] 1.181 [inch]	M6	11 [mm] 0.433 [inch]	8 [Nm] 71 [in.lbs]	13 [mm] 0.512 [inch]	30 [mm] 1.181 [inch]	M6	11 [mm] 0.433 [inch]	8 [Nm] 71 [in.lbs]
			032										
			037										
			042										
			050										
			063										
078													
098													

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**
**OPZIONI • OPTIONS**
**VLPI**

 VALVOLA LIMITATRICE DI PRESSIONE A SCARICO INTERNO  
 PRESSURE RELIEF VALVE WITH INTERNAL EXHAUST


GRUPPO GROUP 1	A		A		B	
	EUR		SAEAA		E32BX - E32CX E32BC - E32CC	
	mm	inch	mm	inch	mm	inch
1SP 009	82.6	3.252	86.1	3.390	82.6	3.252
1SP 012	83.7	3.295	87.2	3.433	83.7	3.295
1SP 016	85.4	3.362	88.9	3.500	85.4	3.362
1SP 020	86.9	3.421	90.4	3.559	86.9	3.421
1SP 025	88.9	3.500	92.4	3.638	88.9	3.500
1SP 032	91.6	3.606	95.1	3.744	91.6	3.606
1SP 037	93.6	3.685	97.1	3.823	93.6	3.685
1SP 042	95.5	3.760	99.0	3.898	95.5	3.760
1SP 050	98.6	3.882	102.1	4.020	98.6	3.882
1SP 063	103.7	4.083	107.2	4.220	103.7	4.083
1SP 078	109.4	4.307	112.9	4.445	109.4	4.307
1SP 098	117.3	4.618	120.8	4.756	117.3	4.618

**ATTENZIONE:**

La valvola limitatrice di pressione si applica sostituendo il coperchio posteriore (previsto solo scarico interno).  
 Il corpo VLP è disponibile in alluminio.

**L'apertura della valvola limitatrice di pressione deve avvenire per tempi non superiori ai 10 secondi ogni minuto, per evitare il surriscaldamento della pompa.**

**WARNING:**

The pressure relief valve can be applied by substituting the rear cover (only internal relief is set).  
 VLP cover is available in aluminum.

**The opening of the pressure relief valve should be carried out for times not over 10" each minute, to avoid the overheating of the pump.**

**POMPE AD INGRANAGGI GRUPPO 1SP**  
**GEAR PUMPS GROUP 1SP**

esempio • example: **1SP - A - 020 - D - EUR - B - N - 10 - 0 - G - VLPI N 120**

**VLPI** = Coperchio con VPL a scarico interno / Cover with VPL with internal exhaust

**N** = Tipo molla - vedi tabella / Spring type - see table

**120** = Taratura - vedi tabella / Setting - see table

TIPO - TYPE	CAMPI DI TARATURE - CALIBRATION FIELDS					
	molla bianca - white spring	<b>B</b>	molla nera - black spring	<b>N</b>	molla rossa - red spring	<b>R</b>
bar	30 ÷ 80		81 ÷ 200		201 ÷ 350	
psi	435 ÷ 1160		1175 ÷ 2900		2915 ÷ 5075	
STANDARD	70 bar (1015 psi)		150 bar (2175 psi)		250 bar (3625 psi)	

NOTA: In caso di omissione del valore di taratura, esso sarà inteso standard (vedi tabella).

NOTE: Without setting request, it will be considered standard (see table).