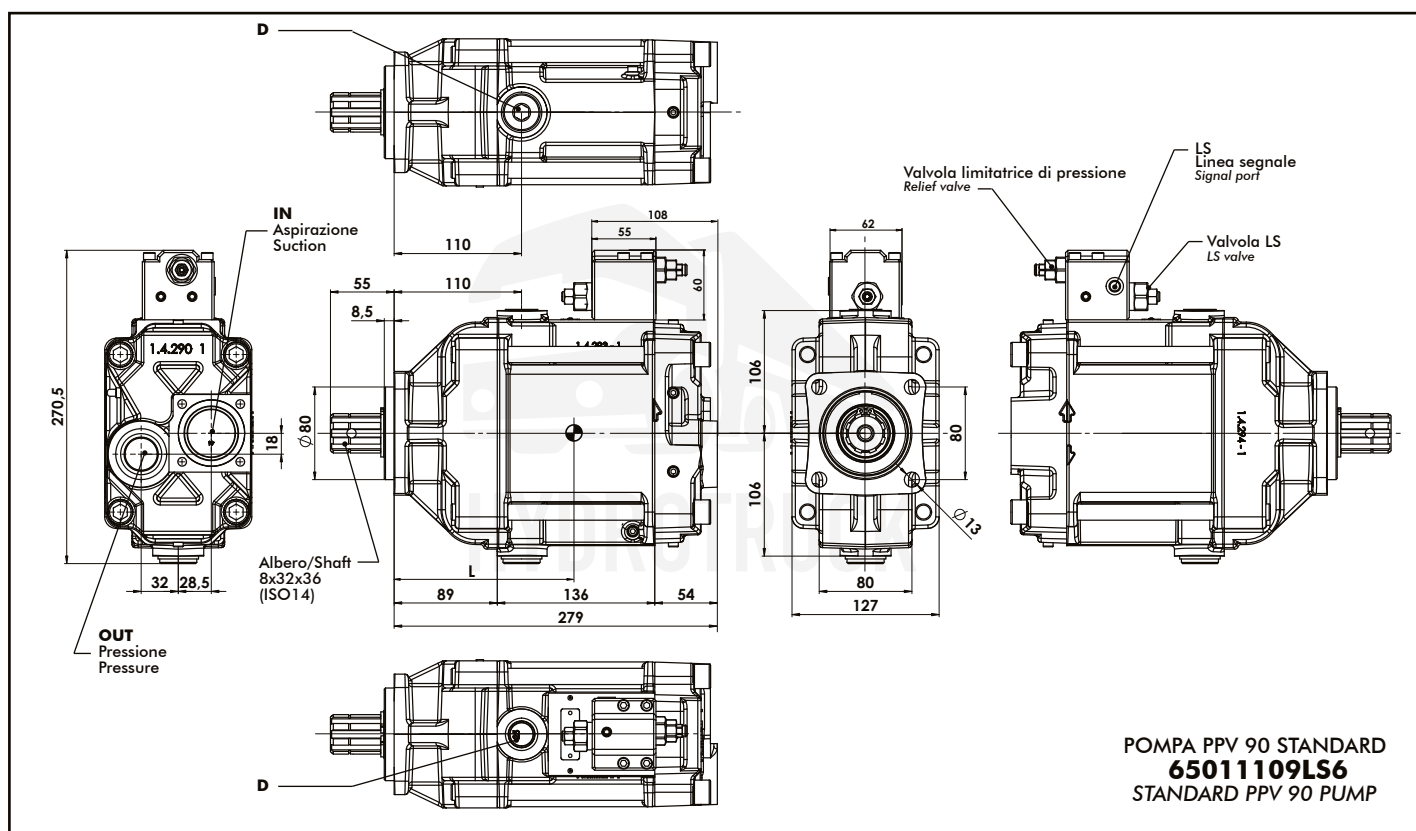
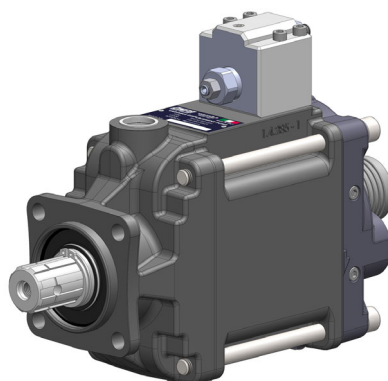


# POMPE A CILINDRATA VARIABILE VARIABLE DISPLACEMENT PUMPS

## PPV 90-110



POMPA PPV 90 STANDARD  
**65011109LS6**  
STANDARD PPV 90 PUMP

04/11/2022

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		FFFS1BDDRRX	FFFS5BDDRRX
LS	BLOCCHETTO LS/ LS BLOCK	G 1/4	
D	DRENAGGIO / DRAIN	G 3/4	1 1/16-12 UN-2B
OUT	PRESSIONE / PRESSURE	G 1	1 5/16-12 UN-2B
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50 mm	
L	BARICENTRO / CENTER OF MASS	148 mm circa/approx	

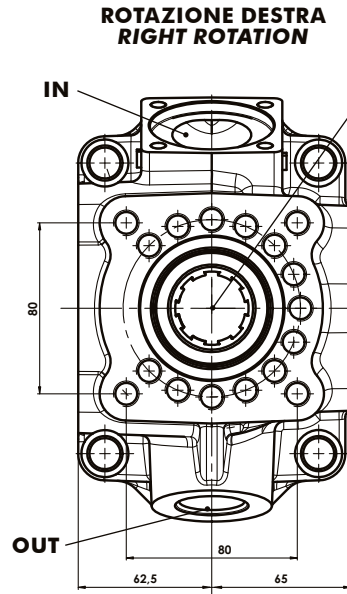
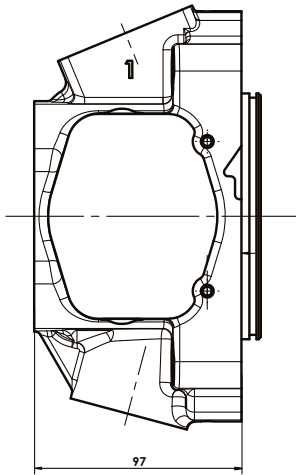


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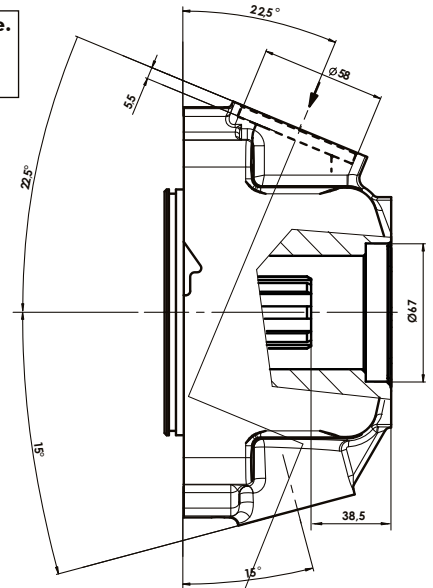
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**FFFST 3 DDDR 1**

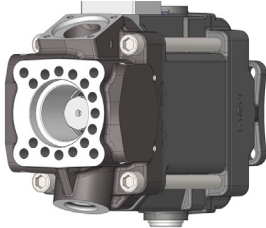


Con albero passante.  
Senza coperchio.  
With thru-shaft.  
Cover not included.

Albero/Shaft  
8x32x36  
(ISO 14)

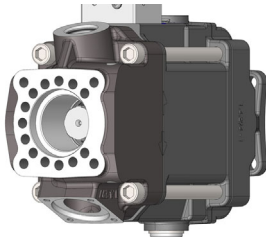


**TANDEM DX**

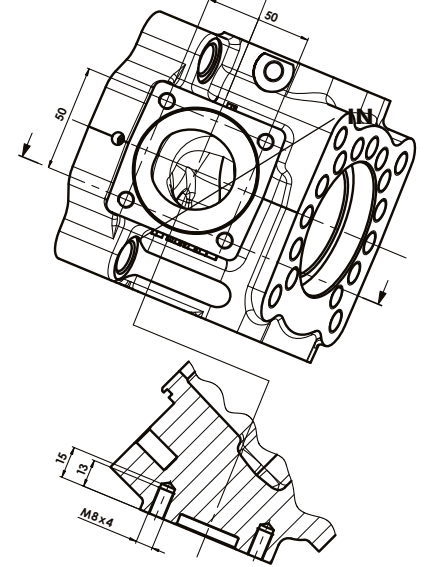


PV	VERSIONE RADIALE VERTICALE CON ALBERO PASSANTE VERTICAL RADIAL VERSION WITH THRU-SHAFT	FFFS1 BDDRRX	FFFS5 BDDRRX
	OUT	PRESSIONE / PRESSURE	G 1
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50mm	

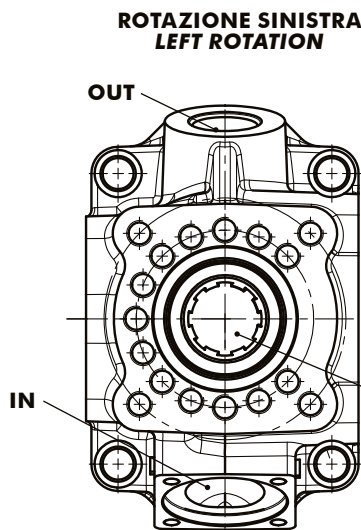
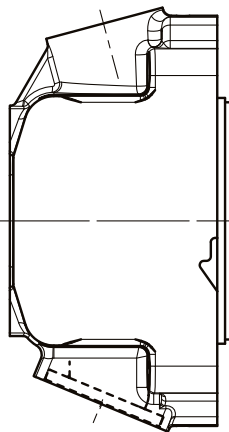
**TANDEM SX**



HYDROTRUCK

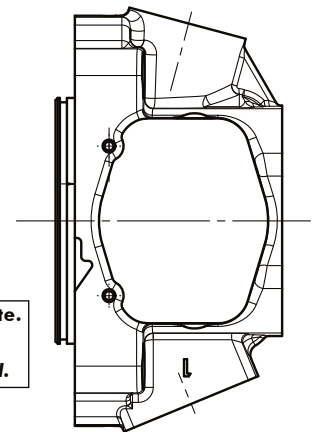


**FFFST 3 DDDR 6**



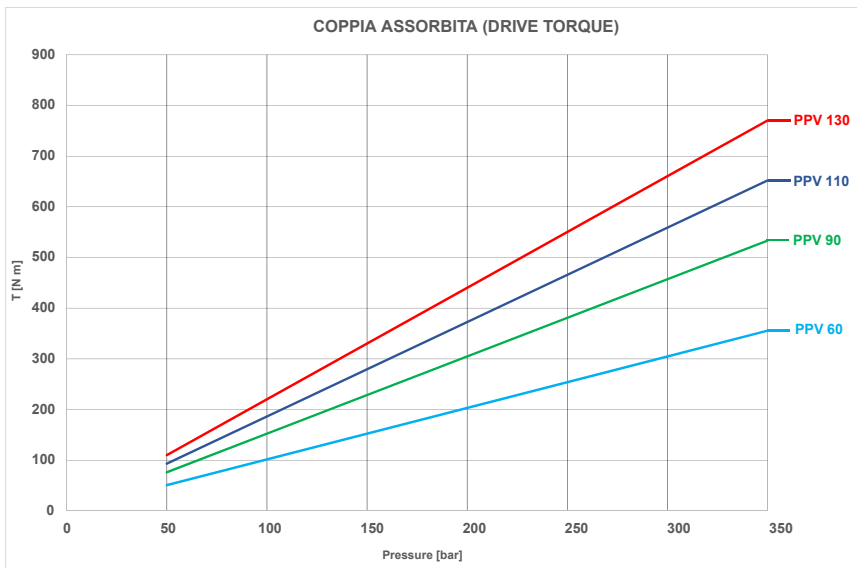
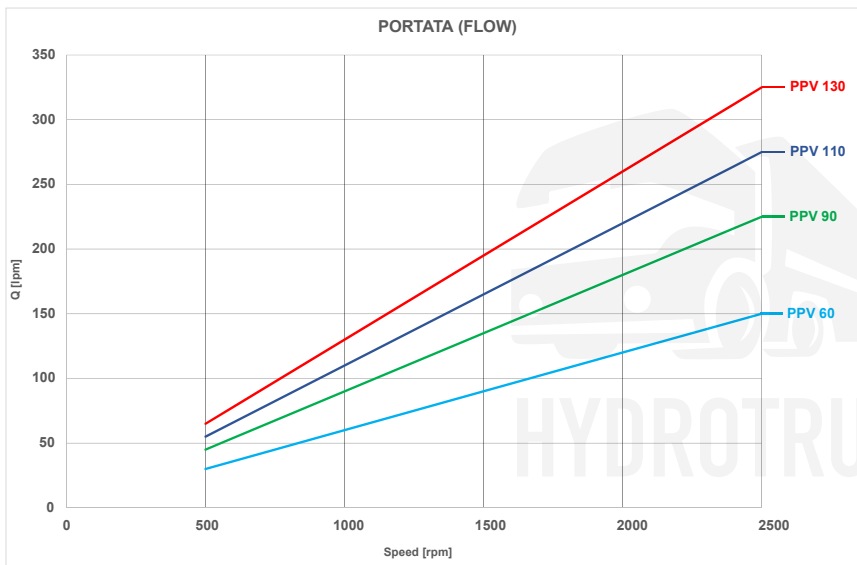
Con albero passante.  
Senza coperchio.  
With thru-shaft.  
Cover not included.

Albero/Shaft  
8x32x36  
(ISO 14)



# POMPE A CILINDRATA VARIABILE / VARIABLE DISPLACEMENT PUMPS

DATI TECNICI / TECHNICAL FEATURES	PPV60	PPV90	PPV110	PPV130
Portata / Flow	60 l/min.	90 l/min.	110 l/min.	130 l/min.
Angolo di regolazione massima / Max. swash plate angle	21,5°			
Pressione di lavoro / Working pressure	Continua Continuous	Intermittente Intermittent	Continua Continuous	Intermittente Intermittent
	375 bar	400 bar	375 bar	400 bar
Pressione d'ingresso assoluta necessaria nel circuito aperto Absolute inlet pressure required in open circuit	0,85 bar			
Pressione massima ammissibile sul corpo (statica/dinamica) Max. permissible housing pressure (static/dynamic)	1 bar	3 bar		
Pressione d'ingresso massima ammissibile Max. permissible inlet pressure (static/dynamic)	2 bar			
Numero di giri max. con angolo di regolazione max. a una pressione d'ingresso assoluta di 1 bar. / Max. speed during suction operation and max. swash plate angle at 1 bar abs. Inlet pressure	2500 rpm	2300 rpm	2200 rpm	2100 rpm
Numero giri max. in annullamento e pressione d'ingresso assoluta 1 bar. / Max. speed with zero stroke and 1 bar abs. Inlet pressure	3000 rpm			
Numero di giri minimo in funzionamento continuo Min. speed in continuous operation	500 rpm			
Coppia motrice necessaria a 100 bar Required drive torque at 100 bar	100 Nm	150 Nm	185 Nm	220 Nm
Potenza motrice a 250 bar e 2.000 rpm Drive power at 250 bar and 2000 rpm	53 kW	80 kW	100 kW	145 kW
Peso / Weight	24 Kg	29 Kg	30 Kg	27 Kg



La versione **ADJUSTABLE**, prevede una vite di regolazione posteriore che limita la cilindrata massima della pompa a valori inferiori a quella nominale.

The **ADJUSTABLE** version consists of a rear setting screw that limits the max. displacement of the pumps to lower values than the nominal one.

#### CILINDRATA / DISPLACEMENT 60cc

Campo regolazione cilindrata Displacement limitation range	40 - 60 cm <sup>3</sup>
Limitazione della cilindrata Displacement limitation range	4,3 cm <sup>3</sup> /rev

#### CILINDRATA / DISPLACEMENT 90cc

Campo regolazione cilindrata Displacement limitation range	55 - 90 cm <sup>3</sup>
Limitazione della cilindrata Displacement limitation range	5,7 cm <sup>3</sup> /rev

#### CILINDRATA / DISPLACEMENT 110cc

Campo regolazione cilindrata Displacement limitation range	85 - 110 cm <sup>3</sup>
Limitazione della cilindrata Displacement limitation range	6,6 cm <sup>3</sup> /rev

#### CILINDRATA / DISPLACEMENT 130cc

Campo regolazione cilindrata Displacement limitation range	90 - 130 cm <sup>3</sup>
Limitazione della cilindrata Displacement limitation range	12 cm <sup>3</sup> /rev

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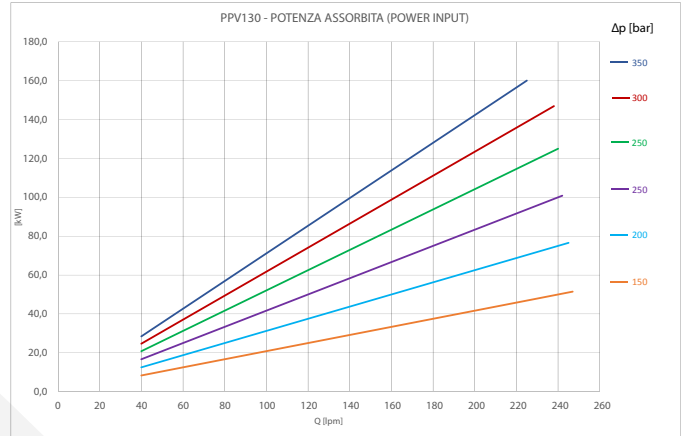
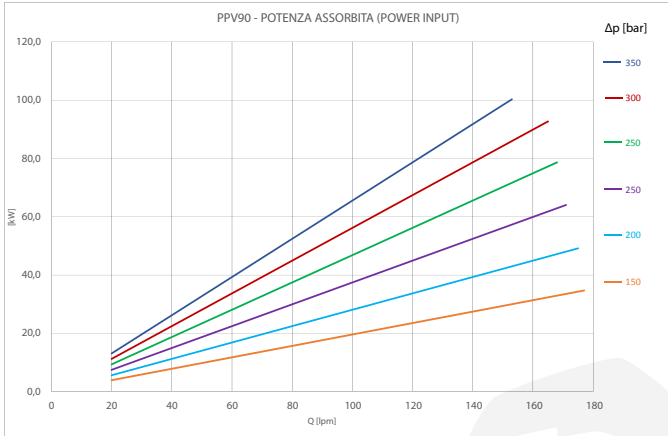
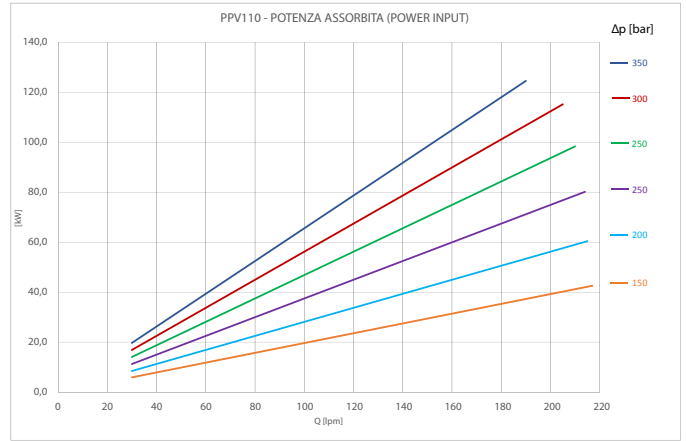
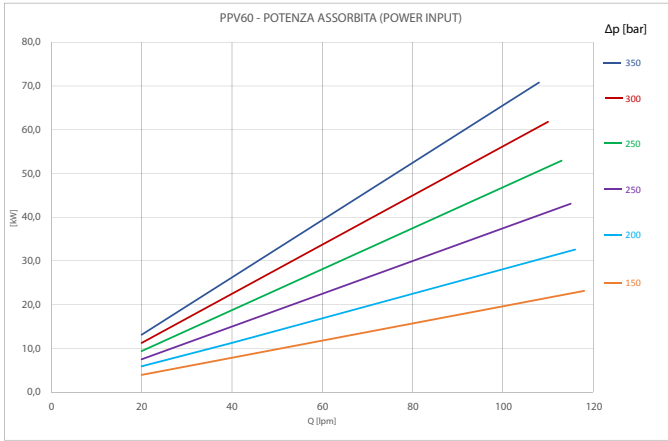


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# POMPE A CILINDRATA VARIABILE / VARIABLE DISPLACEMENT PUMPS



Fluido idraulico / Fluid	Minerale o sintetico compatibile con guarnizioni: Mineral or synthetic compatible with the following seals: HNBR				
Temp. consentita / Allowed temperature	-25 +80 °C				
Viscosità cinematica consigliata Kinematic viscosity suggested	T media ambiente (°C) Average ambient temp. (°C)	< -40	-40 ÷ 10	10 ÷ 35	> 35
	VG (cSt = mm <sup>2</sup> /s)	16	22	32	46
Viscosità cinematica ottimale di esercizio / Optimal kinematic viscosity		VG= 10 cSt ÷ 100 cSt			
Viscosità cinematica max consentita all'avviamento / Max kinematic viscosity suggested at the start-up		VG= 750 cSt			
Indice di viscosità consigliato / Viscosity index suggested		VI > 100			

Filtrazione / Filtration			
Pressione di lavoro / Working pressure (bar)	ΔP < 140	140 < ΔP < 210	ΔP > 210
Contaminazione classe NAS 1638 Contamination class NAS 1638	9	8	7
Contaminazione classe ISO 4406-1999 Contamination class ISO 4406-1999	20/18/15	19/17/14	18/16/13
Da ottenere con filtro β <sub>x</sub> >75 secondo ISO 16889 To be obtained with filter β <sub>x</sub> >75 according ISO 16889	10 μm		

Grandezze nominali  
Nominal values

Portata  
Flow

$$Q [lpm] = \frac{V \cdot n \cdot \eta_V}{1000}$$

Coppia motrice  
Torque

$$T [N \cdot m] = \frac{V \cdot \Delta p}{20 \cdot \pi \cdot \eta_{hm}}$$

Potenza motrice  
Power

$$P [kW] = \frac{2 \cdot \pi \cdot T \cdot n}{60000} = \frac{Q \cdot \Delta p}{600 \cdot \eta_{tot}}$$

## FORMULE / FORMULAS

V = cilindrata [cm<sup>3</sup> / rev] / displacement

Δp = salto di pressione [bar] / pressure drop

n = velocità di rotazione [rpm] / rotation speed

η<sub>V</sub> = rendimento volumetrico / volumetric efficiency

η<sub>hm</sub> = rendimento idro-meccanico / hydro-mechanic efficiency

η<sub>tot</sub> = η<sub>V</sub> x η<sub>hm</sub> = rendimento totale / overall efficiency

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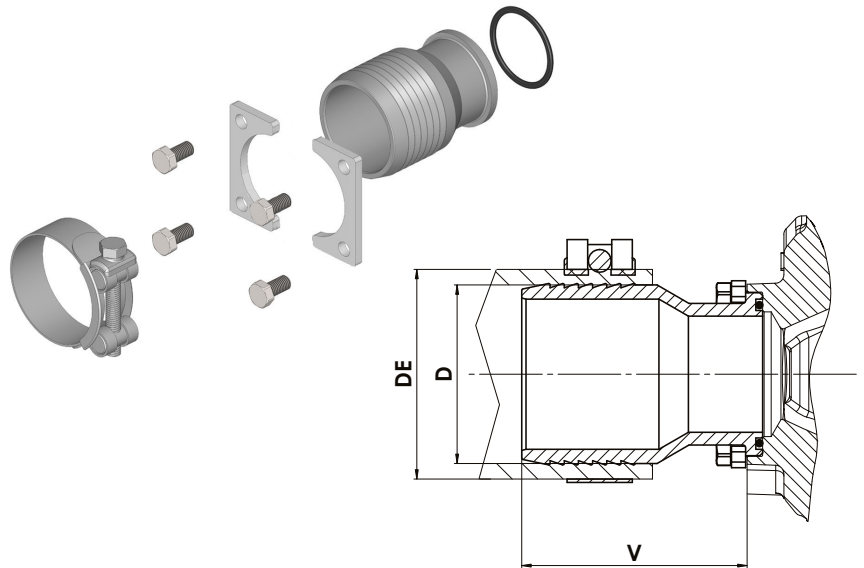
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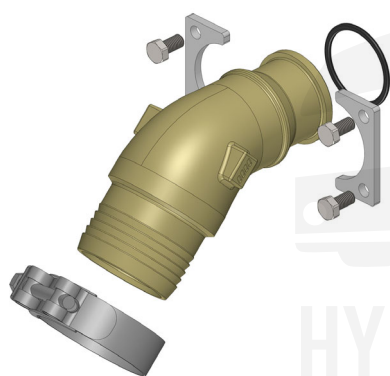
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# ACCESSORI ACCESSORIES

## RACCORDI ASPIRAZIONE SUCTION FITTINGS



Codice Code	D	DE	V	Peso Weighth
	mm	mm	mm	Kg
15511200507	50	60-63	59	0,59
15511200516	50	64-67	59	0,6
15511200605	60	68-73	79	0,77
15511200632	63	74-79	79	0,8
15511200767	76	86-91	94	1



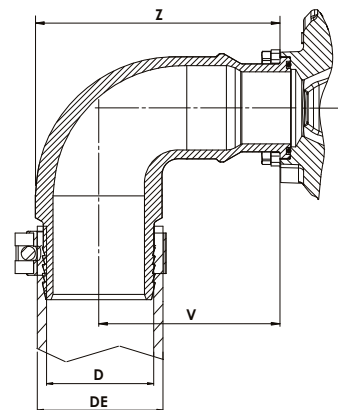
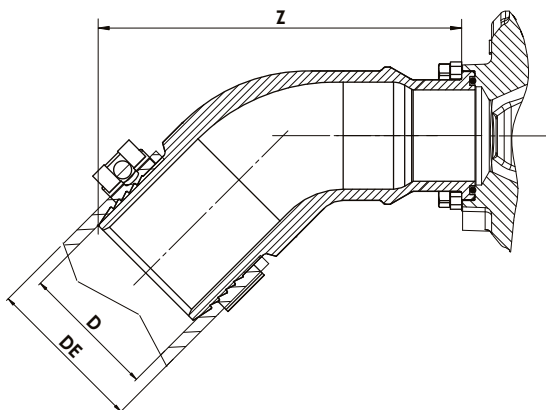
45°

90°



Codice Code	D	DE	Z	Peso Weighth
	mm	mm	mm	Kg
15511245504	50	60-63	141	1
15511245513		64-67		
15511245602	60	68-73	161	1,4
15511245639	63	74-79	163	1,7
15511245764	76	86-91	167	2,1

Codice Code	D	DE	V	Z	Peso Weighth
	mm	mm	mm	mm	Kg
15511290509	50	60-63	94	120	1,1
15511290518		64-67			
15511290607	60	68-73	103	139	1,5
15511290634	63	74-79	103	139	1,9
15511290769	76	86-91	103	140	2,3



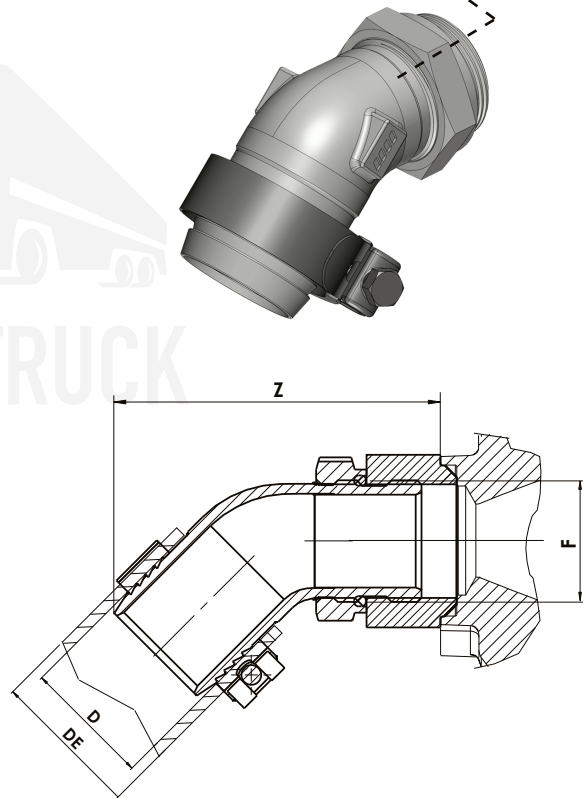
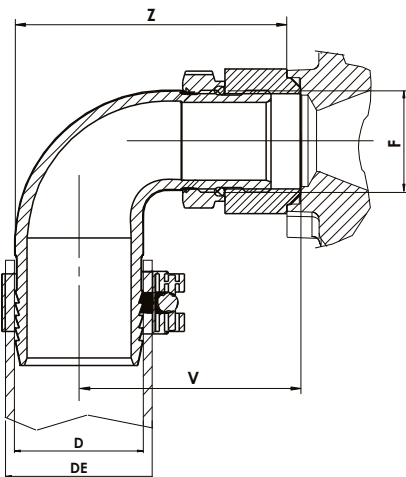
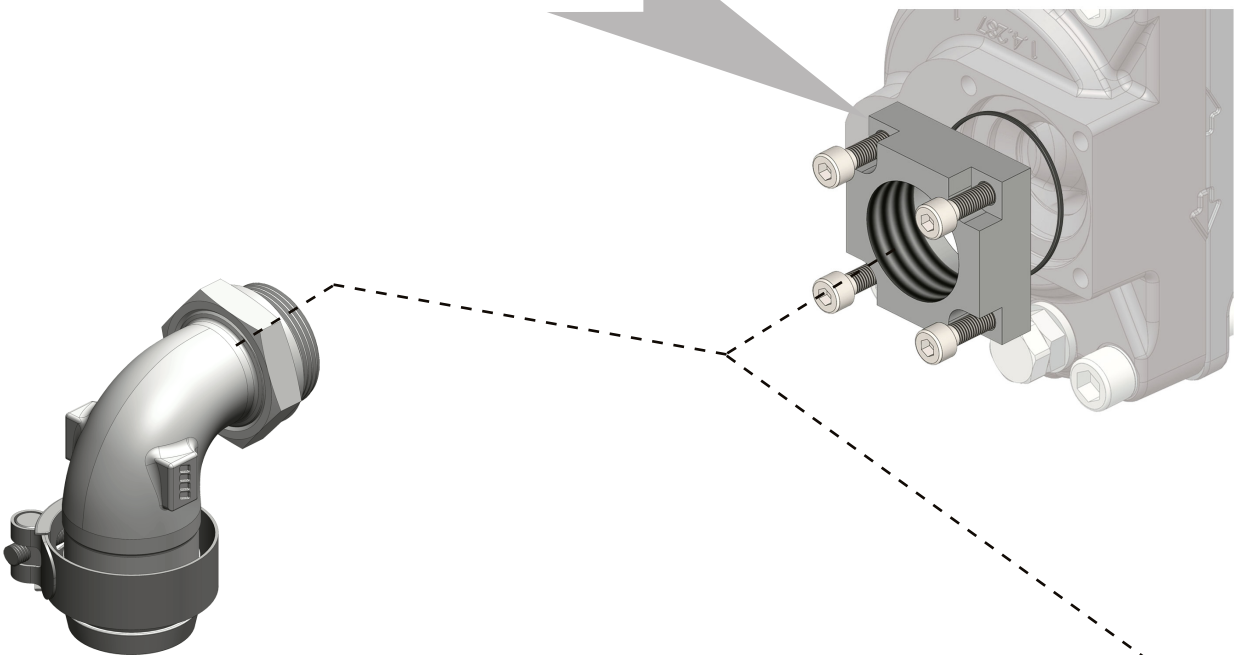
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## ACCESSORI / ACCESSORIES

### 15511300408

Kit flangia foro filettato G1-1/2, per montaggio raccordi GOLD.  
Flange kit G1-1/2 threaded hole, for mounting GOLD fittings.



Codice Code	F	D	DE	V	Z	Peso Weight
	ISO 228	mm	mm	mm	mm	Kg
15510000592	G1-1/2	50	60-63	85	114	0,99
15510000609			64-67			1
15510000654		60	68-73	88	123	1,06

Codice Code	F	D	DE	Z	Peso Weight
	ISO 228	mm	mm	mm	Kg
15509000540	G1-1/2	50	60-63	133	0,79
15509000559			64-67		0,82
15509000611		60	68-73	153	1

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