

## ■ XP series

Portable Equipment for Facing Flanges and Valves

# SERCO XP Series

## Portable Equipment for Facing Flanges and Valves

SERCO XP machines are designed very compactly so that they can be used in very confined spaces. Possessing a large radial feed movement, they are ideal for facing operations on flanges and valves. RTJ grooves can be machined using the tiltable head option.

XP Series	Capacities
XP 400	0 - 400 mm (0" - 15.7")
XP 600	10 - 600 mm (0.39" - 23.6")
XP 1200	20 - 1200 mm (0.79" - 47.2")
XP 1800	20 - 1800 mm (0.79" - 70.8")
XP 2000	20 - 2080 mm (0.79" - 81.9")
XP 2200	20 - 2280 mm (0.79" - 89.7")
XP 2400	20 - 2300 mm (0.79" - 90.5")
XP 2800	20 - 2700 mm (0.79" - 106.3")
XP 3000	20 - 2900 mm (0.79" - 114.2")
XP 3200	20 - 3100 mm (0.79" - 122")



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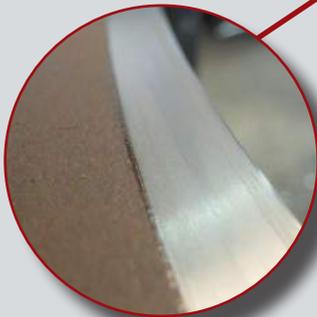
## Rapid Set-up

SERCO XP machines are designed for use in difficult and restrictive conditions. As parallelism and concentricity settings are independent, only two stages are needed to set up the SERCO XP machines. Independent settings mean that the flatness does not need to be adjusted again after the concentricity has been set. Machines can be set-up easily. Once the machine is in position, adjustments can be made effortlessly and achieve high levels of accuracy (0.01 mm).



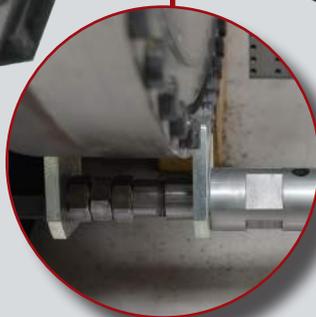
## Precision

With a precision of 0.01 mm and a surface finish quality of Ra 1.6, SERCO machines offer the best-possible performances for your facing operations.



## Light and Compact

The SERCO XP is set up easily in even the tightest spaces, and in all positions. Its light weight, compact dimensions and ergonomic design allow for easy installation and use by a single operator.



## Clamping

SERCO XP machines are positioned and held in place by a column/arm system that clamps on to the outside of the part to be machined.

# High precision, High Performance

## XP 400

Ø 0 - 400 mm (0" - 15.7")



### Description :

Surfacing of all types of flanges: 0 to 400 mm (0" - 15.7").

The SERCO XP 400 is the most compact machine in the series.

Its weight is reduced to a strict minimum and enables it to be handled and set up by a single operator, without any need for extra handling devices.

These features make the machine ideal for all surfacing operations on diameters from 0 to 400 mm (15.7").

### Technical features:

Type	XP 400
Radial movement	30 mm (1.2")
Automatic radial feed (2 speeds)	manuam
Minimum facing Ø	0 mm (0")
Maximum facing Ø	400 mm (15.7")
Minimum clamping Ø	110 mm (4.4")
Maximum clamping Ø	500 mm (19.6")
Maximum drive motor power at 6 bars	780 Watt
Drive motor speed under no-load conditions	100 RPM
Air supply pressure in bars	5 to 7 bar (72 to 101 psi)
Air-flow	1500 l per min (53 cfm)
Weight (approximate)	-
Clamping system	FSTG
Tiltable head (bores, RTJ grooves, conical machining)	Yes

REF.	DESCRIPTION
XP 400	Portable flange facing machine with air-motor – facing Ø: 0-400 mm (0" - 15.7")
XP 400-E	Portable flange facing machine with electric motor – facing Ø: 0-400 mm (0" - 15.7")
XP 400-HY	Portable flange facing machine with hydraulic motor – facing Ø: 0-400 mm (0" - 15.7")

## XP 600

Ø 10 - 600 mm (0.39" - 23.6")



### Description :

Surfacing of all types of flanges: 10 to 600 mm (0.39" - 23.6").

With a minimum height of 150 mm (5.9"), it can be slid into position between the two flanges for machining sealing surfaces, for instance, when a valve is being replaced.

Its weight is reduced to a strict minimum and enables it to be handled and set up by a single operator, without any need for extra handling devices.

The machine is available in a 3-arm version for clamping onto the outside of the flange with the FC 745 system (machining sealing surfaces + dowel pin bearing surfaces) or in a 4-arm version for being held directly in the dowel pin bores (for machining sealing surfaces only).

These features make the machine ideal for all surfacing operations on diameters from 10 to 600 mm (23.6").

### Technical features:

Type	XP 600
Radial movement	40 mm (1.6")
Automatic radial feed (2 speeds)	0,05 (.002") & 0,15 (.006") mm per rev.
Minimum facing Ø	10 mm (0,39")
Maximum facing Ø	600 mm (23.6")
Minimum clamping Ø	200 mm (7.9")
Maximum clamping Ø	660 mm (26")
Maximum drive motor power at 6 bars	340 Watt
Drive motor speed under no-load conditions	100 RPM
Air supply pressure in bars	5 to 7 bar (72 to 101 psi)
Air-flow	1500 l per min (53 cfm)
Weight (approximate)	≈25 kg (55 LB)
Clamping system	FC 745
Tiltable head (bores, RTJ grooves, conical machining)	Yes

REF.	DESCRIPTION
XP 600	Portable flange facing machine with air-motor – facing Ø: 10-600 mm (0.39" - 23.6")
XP 600-E	Portable flange facing machine with electric motor – facing Ø: 10-600 mm (0.39" - 23.6")
XP 600-HY	Portable flange facing machine with hydraulic motor – facing Ø: 10-600 mm (0.39" - 23.6")

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## XP 1200

Ø 20 - 1200 mm (0.79" - 47.2")



### Description :

Facing of all types of flanges: 20 to 1200 mm (0.79 - 47.2")

The SERCO XP 1200 machine uses a machining head that only possesses a radial feed movement. This means that it is more compact than the TU type machines for operations where boring is not required.

4 removable arms adjustable over 360° enable the XP 1200 to be mounted on the dowel pin bores of any type of flange for performing facing operations from 0 to 1200 mm (47.2").

### Technical features:

Type	XP 1200
Radial movement	100 mm (4")
Automatic radial feed (2 speeds)	0,062 (.002") & 0,186 (.007") mm per rev.
Minimum facing Ø	20 mm (0.79")
Maximum facing Ø	1200 mm (47.2")
Minimum clamping Ø	500 mm (20")
Maximum clamping Ø	1400 mm (55")
Maximum drive motor power at 6 bars	2000 Watt
Drive motor speed under no-load conditions	45 RPM
Air supply pressure in bars	5 to 7 bars (72 to 101 psi)
Air-flow	2500 l per min (88 cfm)
Weight (approximate)	≈ 220 kg (485 LB)
Clamping system	FSTG 2050
Tiltable head (bores, RTJ grooves, conical machining)	Yes

REF.	DESCRIPTION
XP 1200	Portable flange facing machine with air-motor – facing Ø: 20-1200 mm (.787" - 47.244").
XP 1200-E	Portable flange facing machine with electric motor – facing Ø: 20-1200 mm (.787" - 47.244").
XP 1200-HY	Portable flange facing machine with hydraulic motor – facing Ø: 20 - 1200 mm (.787" - 47.244").

## XP 1800

Ø 20 - 1800 mm (0.79" - 70.9")



### Description :

Surfacing of all types of flanges: 20 to 1800 mm (0.79" to 70.9")

The SERCO XP 1800 machine is designed on the same principles as the XP 1200, with a radial movement machining head. The four mobile clamping arms have been reinforced to maintain the rigidity of the unit when machining diameters up to 1,800 mm (70.9").

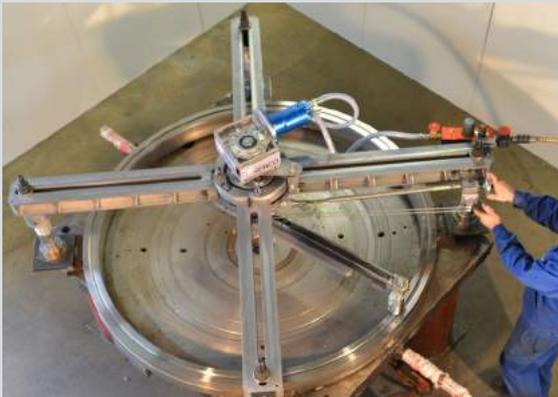
### Technical features:

Type	XP 1800
Radial feed movement	200 mm (8")
Automatic radial feed (2-speed)	Variable and independent
Minimum facing Ø	20 mm (0.79")
Maximum facing Ø	1800 mm (70.9")
Minimum clamping Ø	500 mm (20")
Maximum clamping Ø	2050 mm (81")
Maximum motor output power in Watts at 6 bars	2000 Watt
Driving motor speed under no-load condition	45 RPM
Air supply pressure in bars	5 to 7 bars (72 to 101 psi)
Air flow	2500 l per min (88 cfm)
Weight (approximate)	≈ 380 kg (≈ 838 LB)
Clamping system	FSTG 2050
Tiltable head (bores, RTJ grooves, conical machining)	Yes

REF.	DESCRIPTION
XP 1800	Portable flange facing machine with air-motor – facing Ø: 20-1800 mm (.787" - 70.866")
XP 1800-E	Portable flange facing machine with electric motor – facing Ø: 20-1800 mm (.787" - 70.866")
XP 1800-HY	XP 1800-HY Portable flange facing machine with hydraulic motor – facing Ø: 20-1800 mm (.787" - 70.866")

## XP 2000

Ø 20 - 2080 mm (0.79" - 82")



### Description :

Surfacing of all types of flanges from 20 to 2080 mm (0.79" to 82").

Just like the XP 1200 and XP 1800 models, the SERCO XP 2000 is equipped with a radial-feed machining head and four removable clamping arms the position of which can be adjusted depending on the application. SERCO engineers have paid particular attention to maintaining the rigidity of the assembly in order to guarantee high precision machining on surfaces up to 2080 mm (81.9") in diameter.

### Technical features:

Type	XP 2000
Radial feed movement	200 mm (8")
Automatic radial feed (2-speed)	Variable and independent
Minimum facing Ø	20 mm (0.79")
Maximum facing Ø	2080 mm (82")
Minimum clamping Ø	650 mm (25.6")
Maximum clamping Ø	2250 mm (88.6")
Maximum motor output power in Watts at 6 bars	3000 Watt
Driving motor speed under no-load condition	45 RPM
Air supply pressure in bars	5 to 7 bars (72 to 101 psi)
Air flow	3500 l per min (124 cfm)
Weight (approximate)	≈450 kg (99 LB)
Clamping system	FSTG 2500
Tiltable head (bores, RTJ grooves, conical machining)	Yes

REF.	DESCRIPTION
XP 2000	Portable flange facing machine with air-motor – facing Ø: 20-2080 mm
XP 2000-E	Portable flange facing machine with electric motor – facing Ø: 20-2080 mm
XP 2000-HY	Portable flange facing machine with hydraulic motor – facing Ø: 20-2080 mm

## XP 2200

Ø 20 - 2280 mm (0.79" - 89.7")



### Description :

Surfacing of all types of flanges: 20 to 2010 mm (0.79" to 89.7").

Using the same machining head as the smaller versions, the SERCO XP 2200 has been designed for machining even larger diameters. To do this, an intermediate ring has been added to prevent any inadvertent movement on the flange facing attachment. In this way, the arm is guided perfectly, which enables the XP 2200 to guarantee accuracies similar to those obtained with other equipment in the SERCO range, and this up to diameters of 2,280 mm (89.764").

### Technical features:

Type	XP 2200
Radial feed movement	200 mm (8")
Automatic radial feed (2-speed)	Variable and independent
Minimum facing Ø	20 mm (0.79")
Maximum facing Ø	2280 mm (89.7")
Minimum clamping Ø	650 mm (25.6")
Maximum clamping Ø	2450 mm (96.5")
Maximum motor output power in Watts at 6 bars	3500 Watt
Driving motor speed under no-load condition	45 RPM
Air supply pressure in bars	5 à 7 bar (72 à 101 psi)
Air flow	3500 l per min (124 cfm)
Weight (approximate)	≈550 kg (≈ 1213 LB)
Clamping system	FSTG 2500
Tiltable head (bores, RTJ grooves, conical machining)	Yes

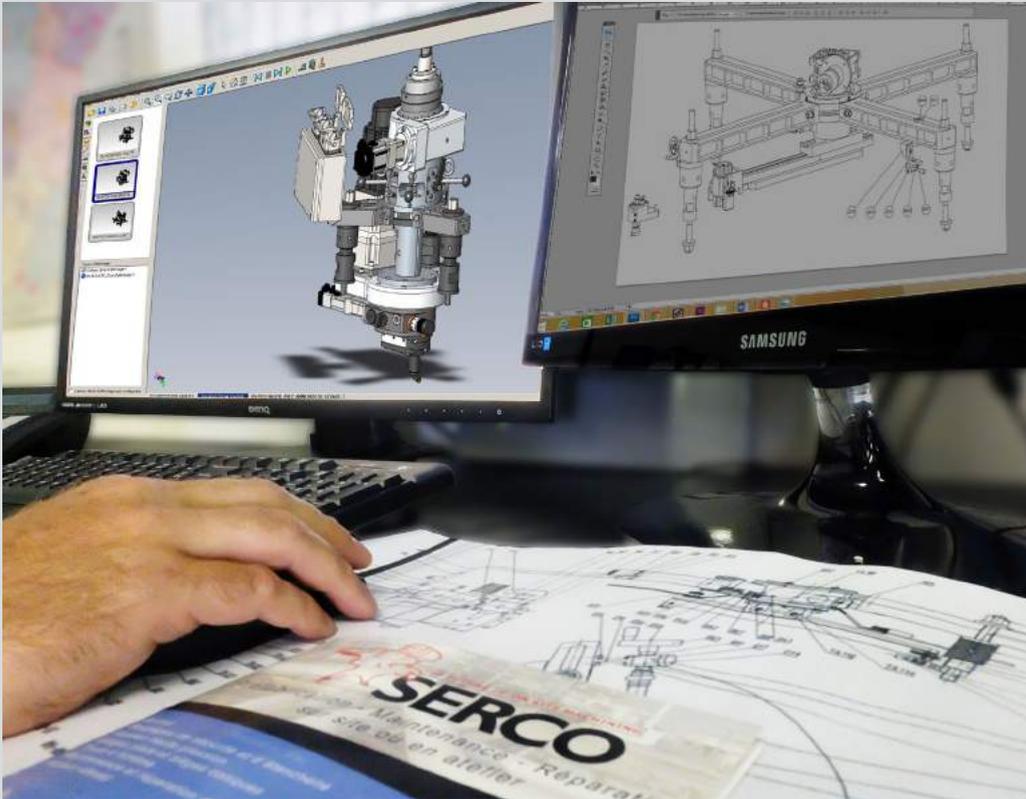
REF.	DESCRIPTION
XP 2200	Portable flange facing machine with air-motor – facing Ø: 20-2280 mm (.787" - 89.764")
XP 2200-E	Portable flange facing machine with electric motor – facing Ø: 20-2280 mm (.787" - 89.764")
XP 2200-HY	Portable flange facing machine with hydraulic motor – facing Ø: 20-2280 mm (.787" - 89.764")

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## Designing Special Machines

XP models for diameters larger than those listed in the catalog are available upon request



XP Series	Capacities
XP 2400	20 - 2300 mm (0.79" - 90.5")
XP 2800	20 - 2700 mm (0.79" - 106.3")
XP 3000	20 - 2900 mm (0.79" - 114.2")
XP 3200	20 - 3100 mm (0.79" - 122")

**SERCO can design special machines and devices meeting the requirements given in your specifications.**

SERCO specializes in making machine tools for machining flanges and valves. SERCO benefits from all the skill and expertise of its research and development team to find solutions to specific problems. Our engineers and technicians possess all the technical expertise needed for meeting the requirements of nuclear power, oil & gas, chemical, petrochemical, food-processing and other industries.

#### Response & Compliance to schedules:

Our teams deal with your requests just as quickly as possible. They work on your projects with competence and professionalism.

Our technical expertise and knowledge enable us to offer you a suitable, quick,

personalized solution.

#### Consistant Quality in Service and Manufacture:

Serco has designed and built over 800 special machining and welding units over the past 50 years. These machines have applications in many different fields such as:

- Construction
- Prefabrication
- Repair and maintenance

Our teams are always ready to make their energy and experience available to our customers throughout the world. Excellence marks the quality of our achievements.

#### SERCO Certifications:



Certification of companies that train and monitor personnel subject to ionizing radiation in the workplace.



Safety systems compliant to EC standards.