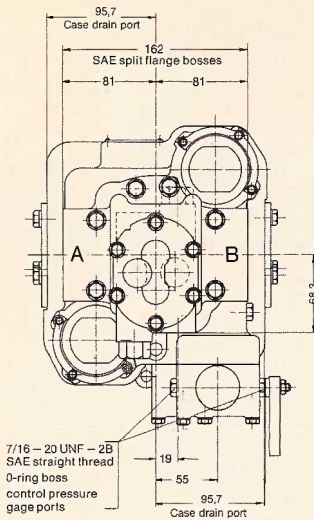
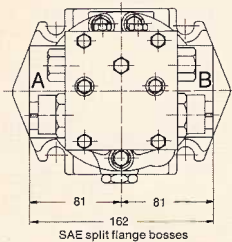


Installation dimensions series 20 units



A 3

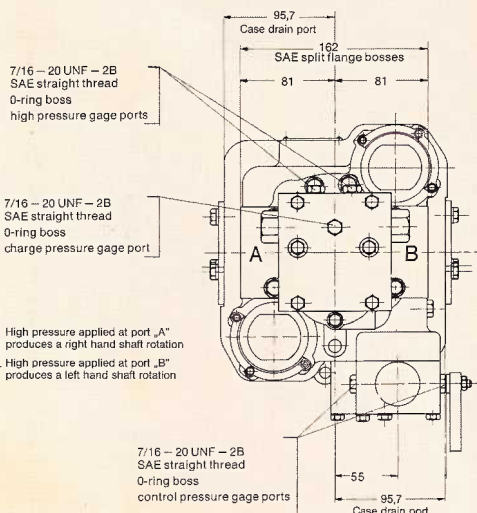
Variable displacement pump SPV 20



High pressure applied at port „B“ produces a right hand shaft rotation
High pressure applied at port „A“ produces a left hand shaft rotation

A 6

Fixed displacement motor SMF 20



High pressure applied at port „A“ produces a right hand shaft rotation
High pressure applied at port „B“ produces a left hand shaft rotation

A 9

Variable displacement motor SMV 20

Max. displacement 33,3 cm³/rev. (SPV and SMV)

Fixed displacement 33,3 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 21

Side fit filled root

Bore diameter for shaft coupling prior to splining 31,75 + 0,062

Charge pressure relief valve (Charge pump housing) set at appr. 14 bar at 1500 rpm

Charge pressure relief valve (motor valve block) set at appr. 12 bar

Charge pump displacement 12,3 cm³/rev.*

Torque applied to control handle shaft not to exceed 17,3 Nm
max. required torque at control handle shaft 10 Nm

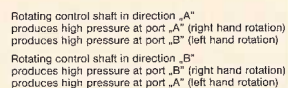
Control handle shaft spline data: 64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

Number of teeth 24

* Other displacements see page 49

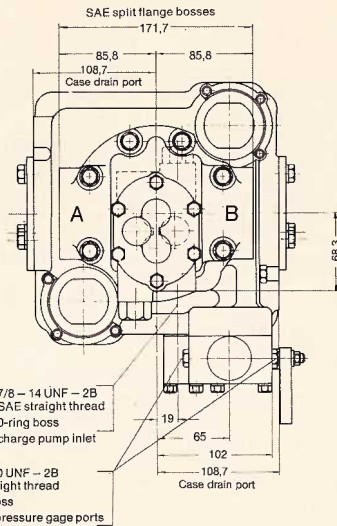
All dimensions subject to change



81

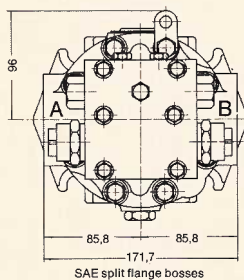


Installation dimensions series 21 units



B 3

Variable displacement pump SPV 21



High pressure applied at port „B“
produces a right hand shaft rotation
High pressure applied at port „A“
produces a left hand shaft rotation

B 6

Fixed displacement motor SMF 21

Max. displacement 51,6 cm³/rev. (SPV and SMV)

Fixed displacement 51,6 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 21

Side fit filled root

Bore diameter for shaft coupling
prior to splining 31,75 + 0,062

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 12,3 cm³/rev.*

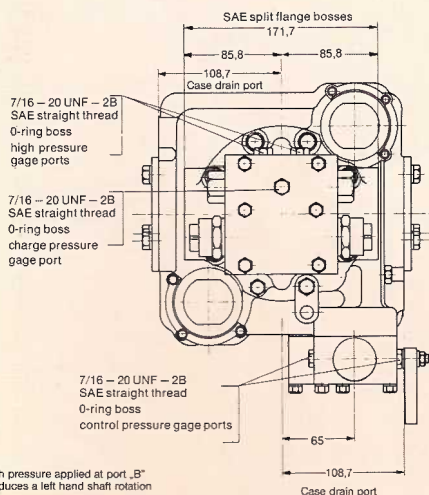
Torque applied to control handle shaft
not to exceed 17,3 Nm
max. required torque
at control handle shaft 10 Nm

Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

Number of teeth 24

* Other displacements see page 49



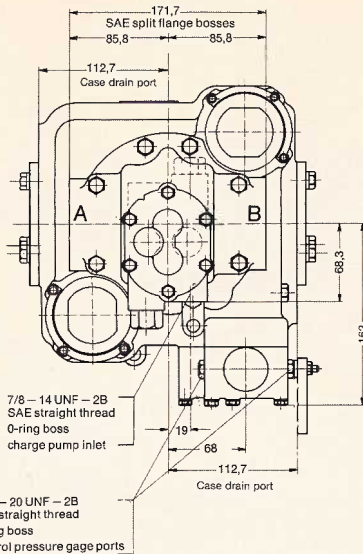
High pressure applied at port „B“
produces a left hand shaft rotation
High pressure applied at port „A“
produces a right hand shaft rotation

B 9

Variable displacement motor SMV 21

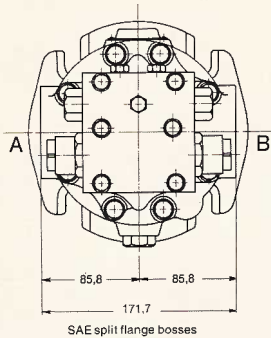
All dimensions subject to change

Installation dimensions series 22 units



C3

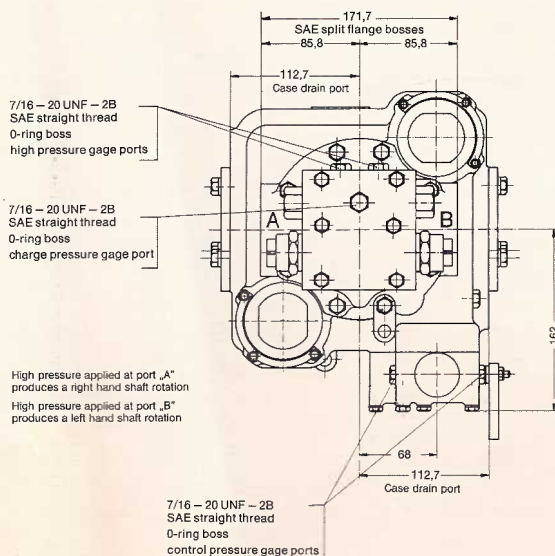
Variable displacement pump SPV 22



High pressure applied at port „B“
produces a right hand shaft rotation
High pressure applied at port „A“
produces a left hand shaft rotation

C6

Fixed displacement motor SMF 22



C9

Variable displacement motor SMV 22

Max. displacement 69,8 cm³/rev. (SPV and SMV)

Fixed displacement 69,8 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 21

Side fit filled root

Bore diameter for shaft coupling
prior to splining 31,75 + 0,062

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 18,03 cm³/rev.*

Torque applied to control handle shaft
not to exceed 17,3 Nm
max. required torque
at control handle shaft 10 Nm

Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

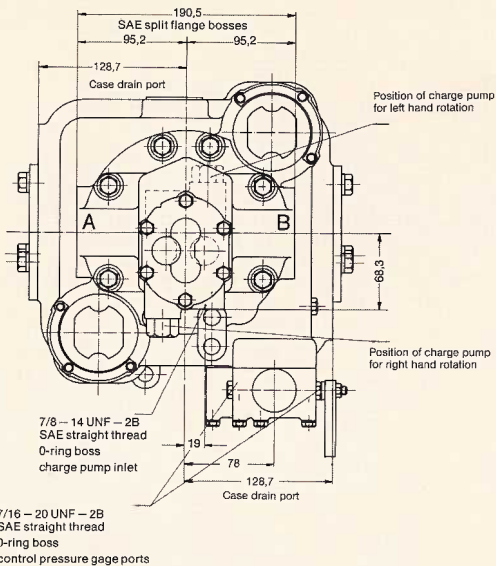
Number of teeth 24

* Other displacements see page 49

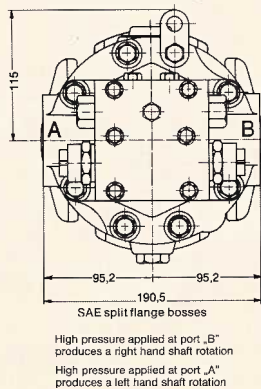
All dimensions subject to change



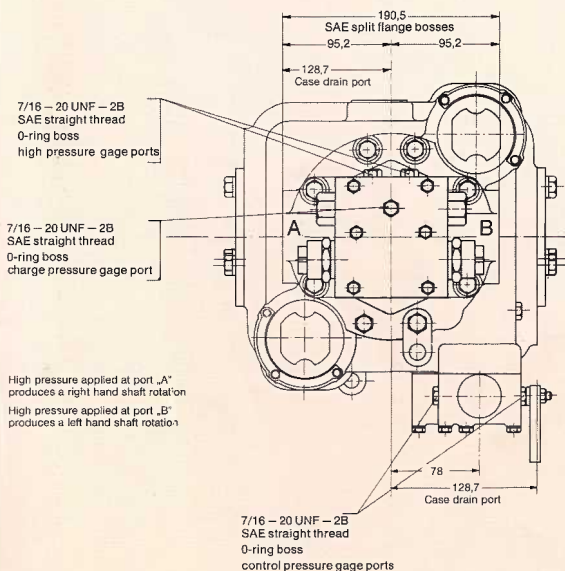
Installation dimensions series 23 units



Variable displacement pump SPV 23



Fixed displacement motor SMF 23



Variable displacement motor SMV 23

Max. displacement 89,0 cm³/rev. (SPV and SMV)

Fixed displacement 89,0 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 23

Side fit filled root

Bore diameter for shaft coupling prior to splining 34,95 + 0,062

Charge pressure relief valve (Charge pump housing) set at appr. 14 bar at 1500 rpm

Charge pressure relief valve (motor valve block) set at appr. 12 bar

Charge pump displacement 18,03 cm³/rev.*

Torque applied to control handle shaft not to exceed 17,3 Nm
max. required torque at control handle shaft 10 Nm

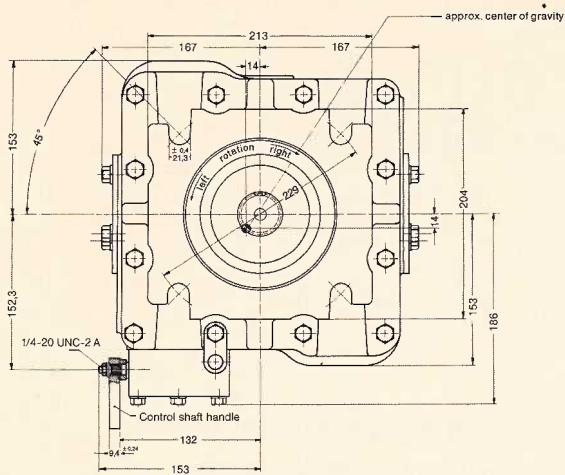
Control handle shaft spline data: 64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

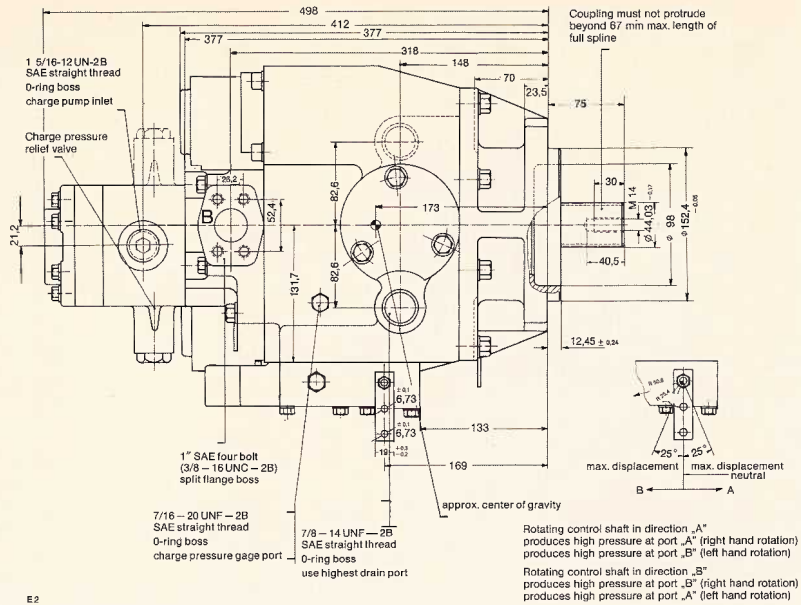
Number of teeth 24

* Other displacements see page 49

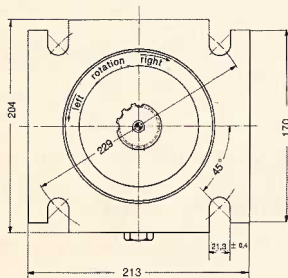
All dimensions subject to change



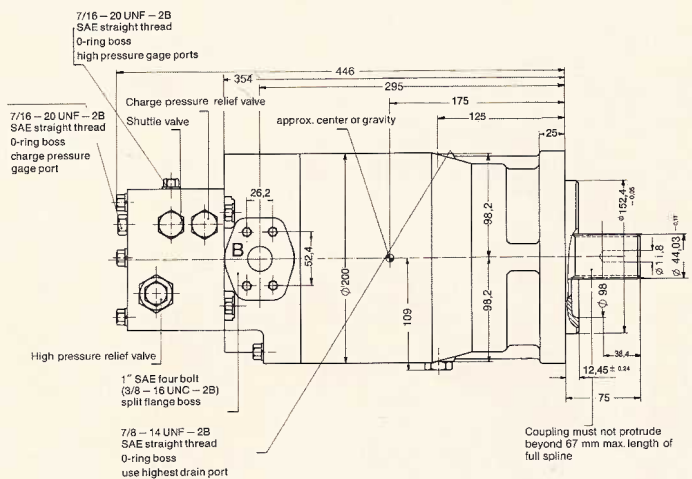
E1



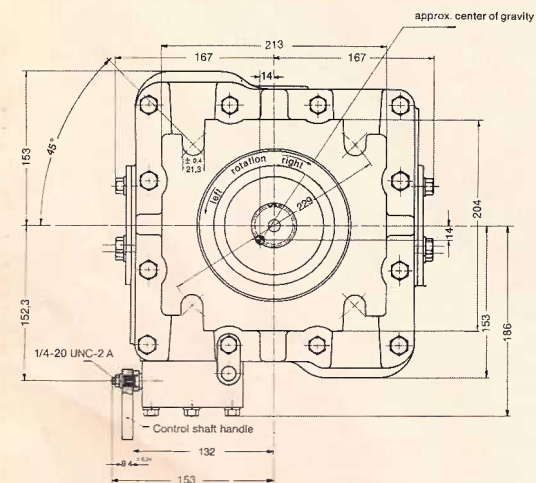
E2



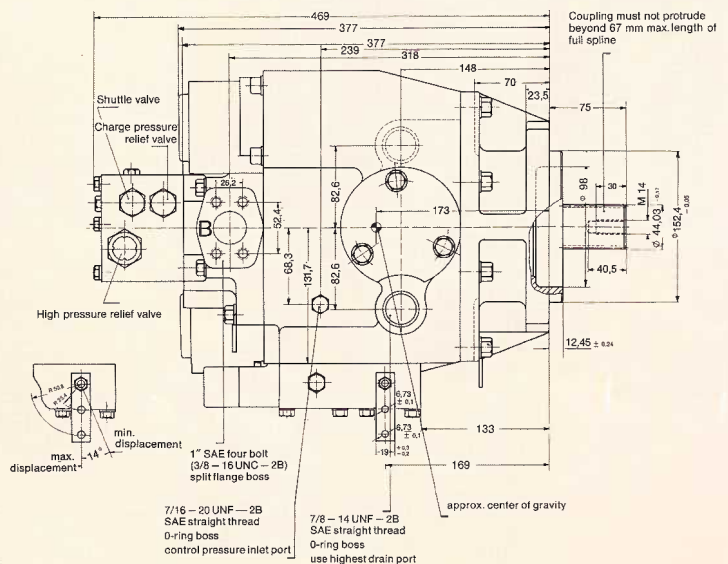
E4



E5

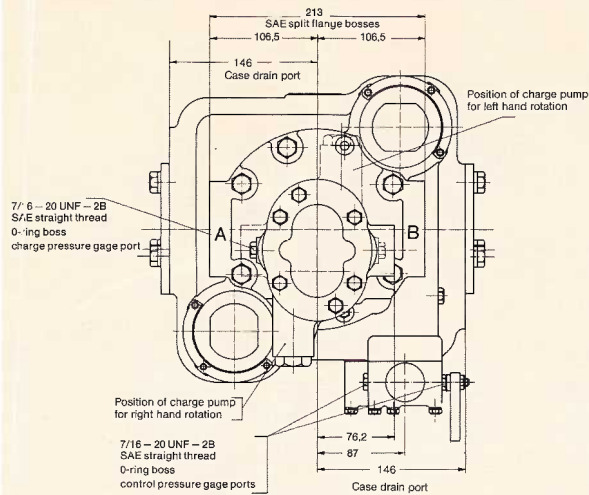


E7

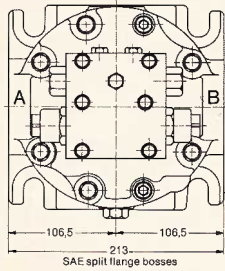


E8

Installation dimensions series 24 units

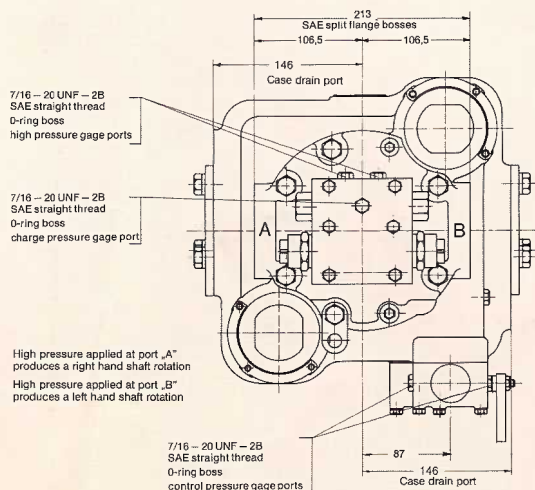


Variable displacement pump SPV 24



High pressure applied at port „B“
produces a right hand shaft rotation
High pressure applied at port „A“
produces a left hand shaft rotation

Fixed displacement motor SMF 24



Variable displacement motor SMV 24

Max. displacement 118,7 cm³/rev. (SPV and SMV)

Fixed displacement 118,7 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 27

Side fit filled root

Bore diameter for shaft coupling
prior to splining 41,28 + 0,062

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 18,85 cm³/rev.*

Torque applied to control handle shaft
not to exceed 17,3 Nm
max. required torque
at control handle shaft 10 Nm

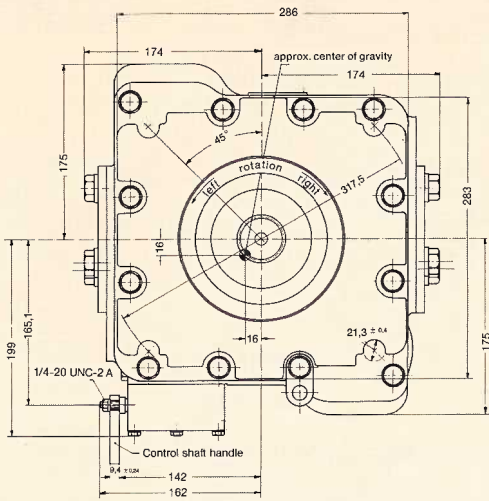
Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

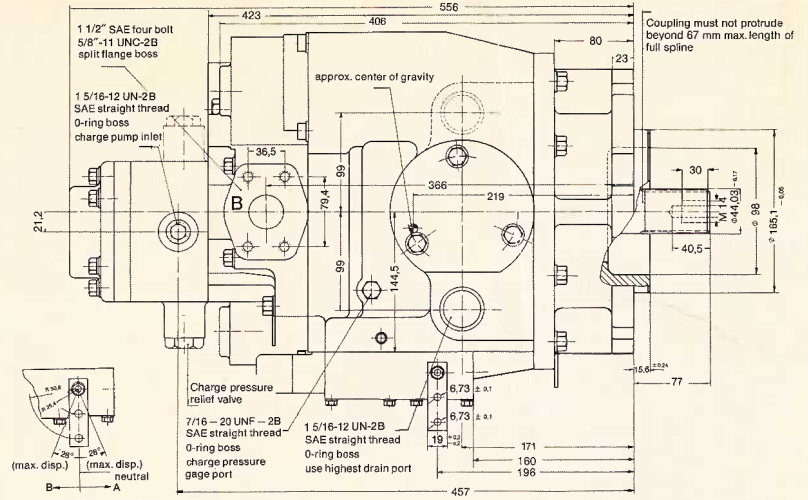
Number of teeth 24

* Other displacements see page 49

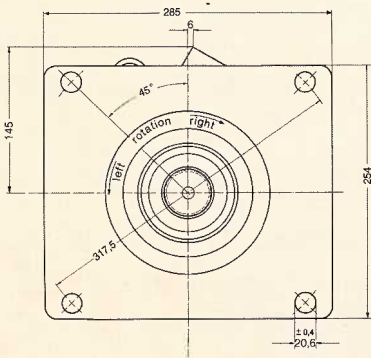
All dimensions subject to change



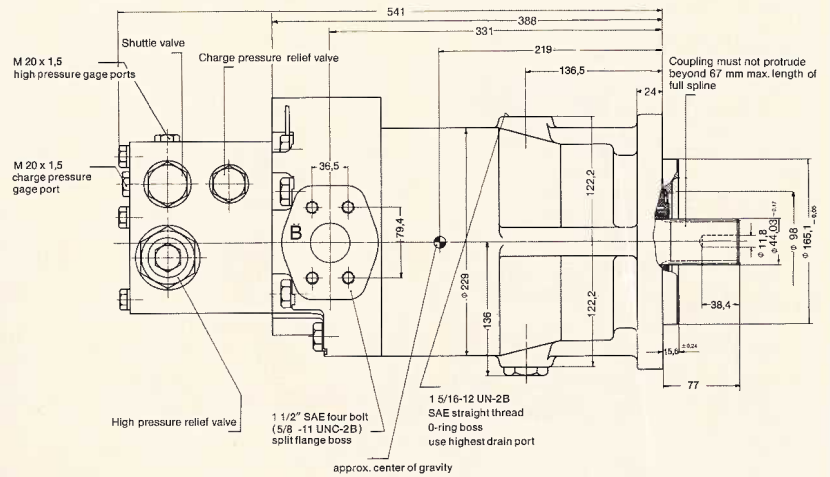
F1



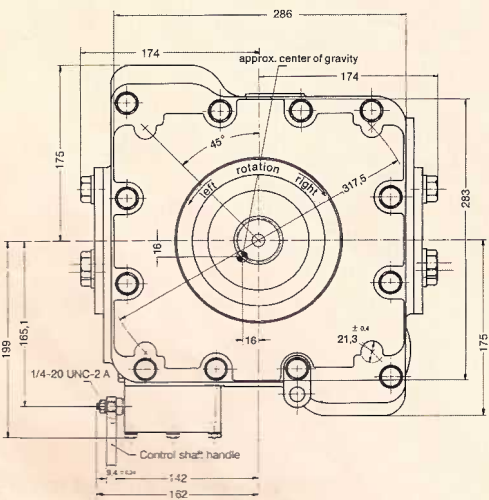
F2



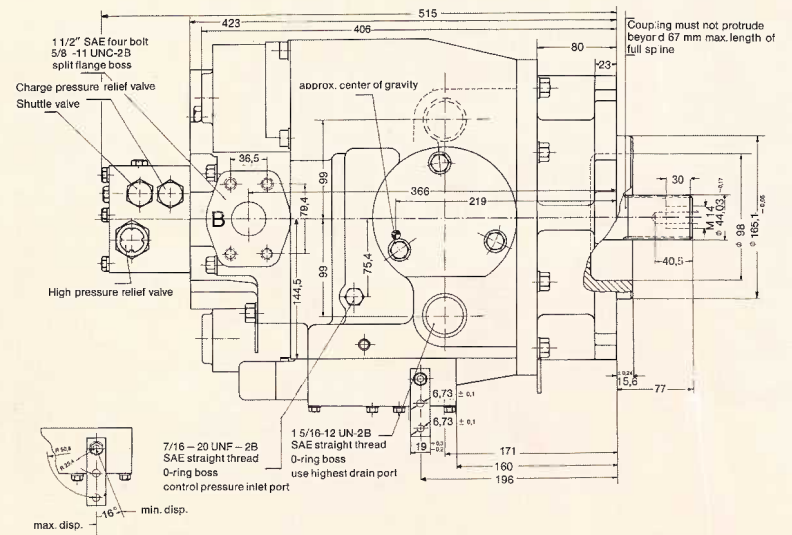
F4



F5

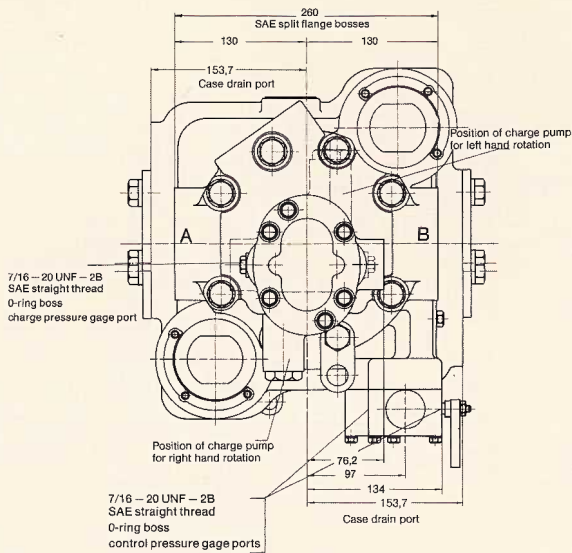


F7

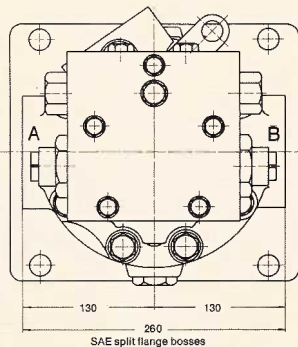


F8

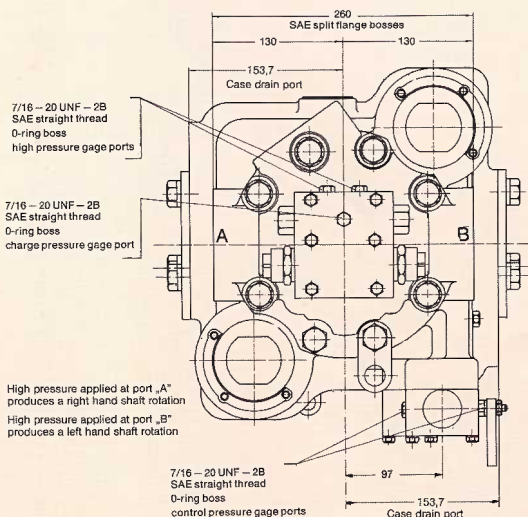
Installation dimensions series 25 units



Variable displacement pump SPV 25



Fixed displacement motor SMF 25



Variable displacement motor SMV 25

Max. displacement 165,8 cm³/rev. (SPV and SMV)

Fixed displacement 165,8 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.
Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 27

Side fit filled root

Bore diameter for shaft coupling
prior to splining 41,28 + 0,062

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 32,8 cm³/rev.*

Torque applied to control handle shaft
not to exceed 17,3 Nm
max. required torque
at control handle shaft 10 Nm

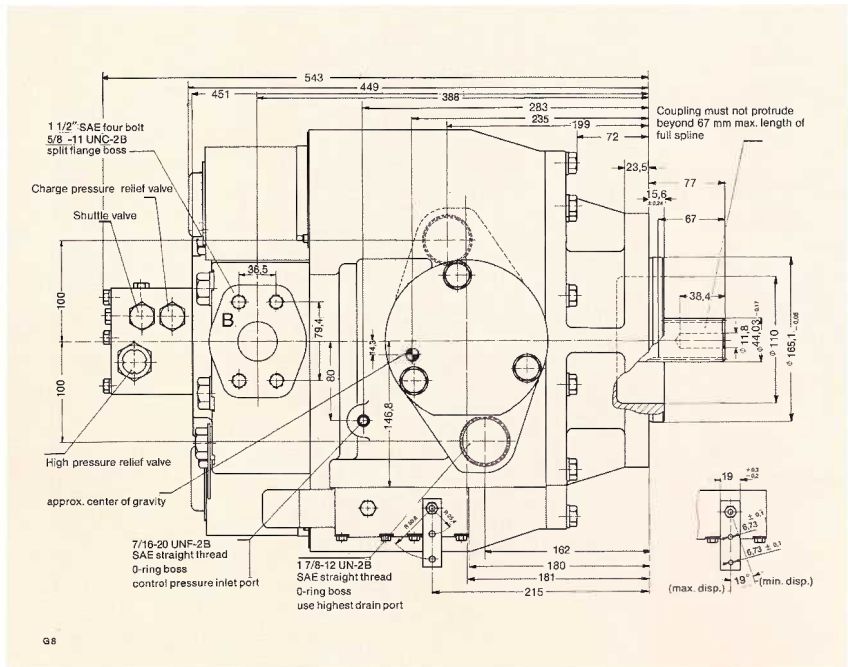
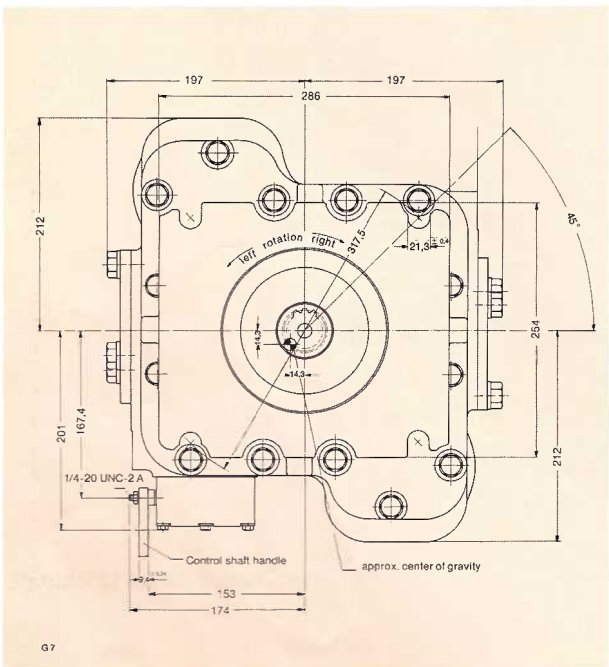
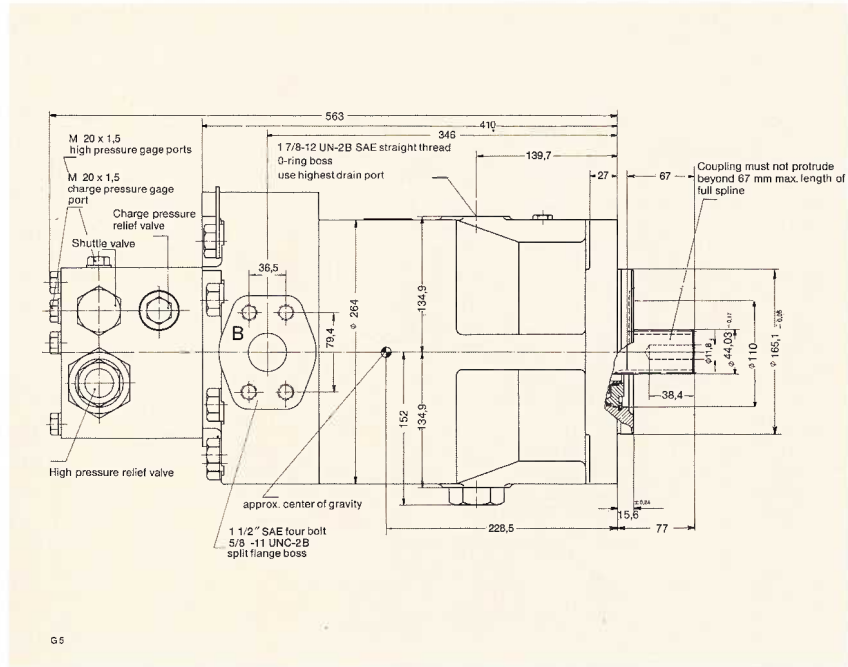
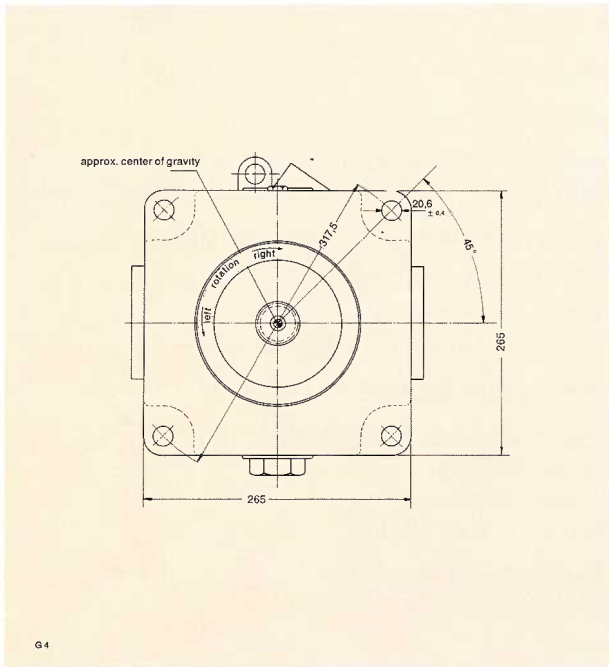
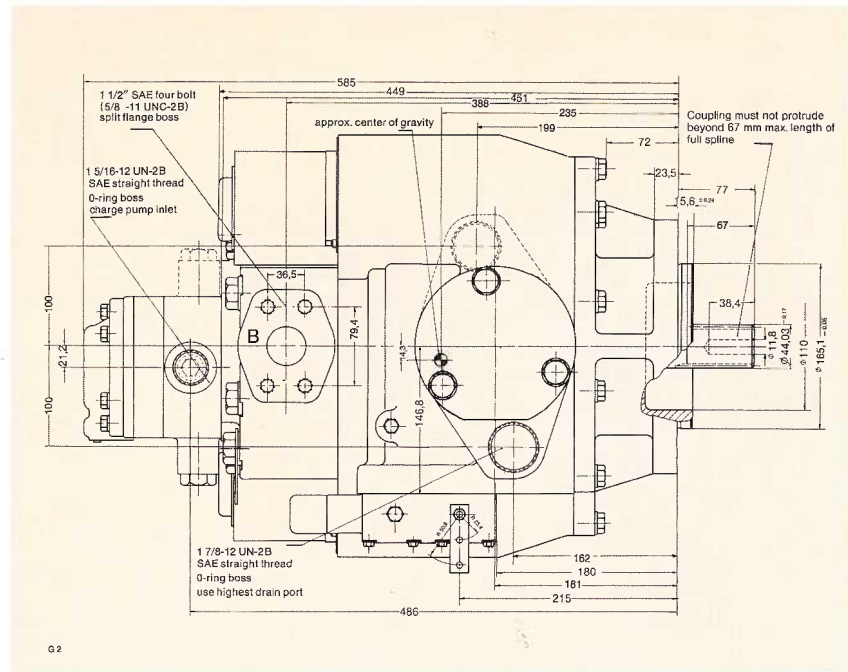
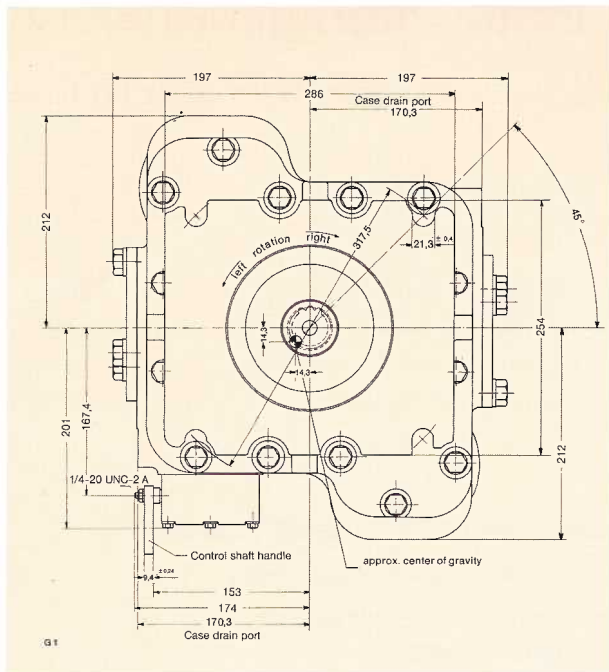
Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 - 0,14

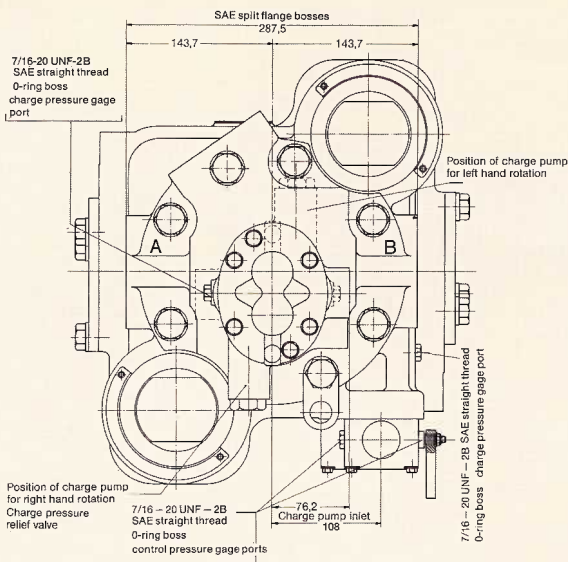
Number of teeth 24

* Other displacements see page 49

All dimensions subject to change

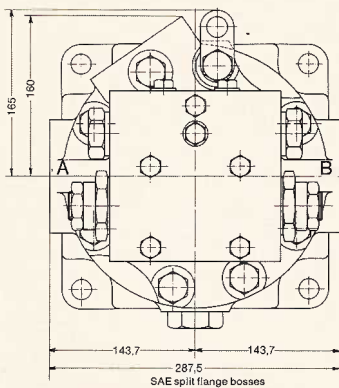


Installation dimensions series 26 units



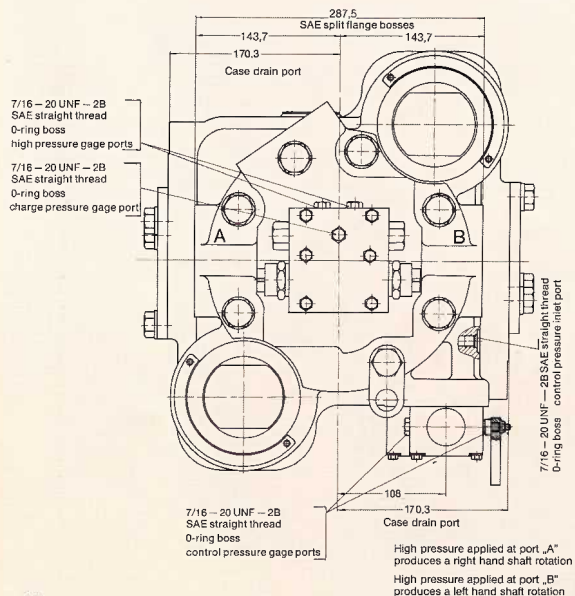
G 3

Variable displacement pump SPV 26



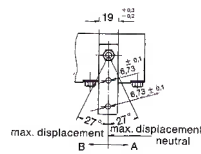
G 6

Fixed displacement motor SMF 26



G 9

Variable displacement motor SMV 26



Rotating control shaft in direction „A“ produces high pressure at port „A“ (right hand rotation) produces high pressure at port „B“ (left hand rotation)

Rotating control shaft in direction „B“ produces high pressure at port „B“ (right hand rotation) produces high pressure at port „A“ (left hand rotation)

G 2a

Max. displacement 227,3 cm³/rev. (SPV and SMV)

Fixed displacement 227,3 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.
Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 27

Side fit filled root

Bore diameter for shaft coupling
prior to splining 41,28 + 0,062

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 32,8 cm³/rev.*

Torque applied to control handle shaft
not to exceed 17,3 Nm
max. required torque
at control handle shaft 10 Nm

Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

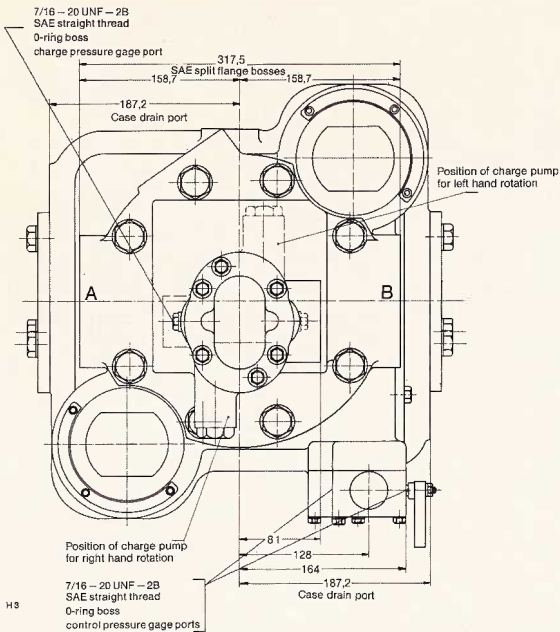
Knurled o. d. 10,13 - 0,14

Number of teeth 24

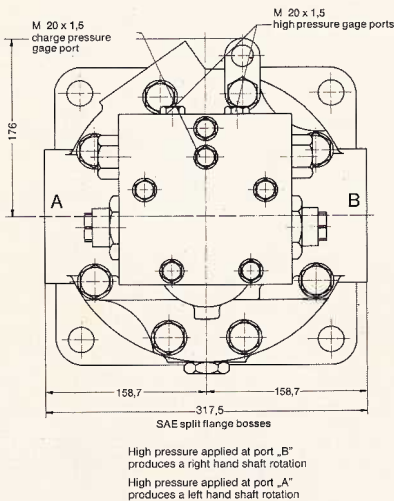
* Other displacements see page 49

All dimensions subject to change

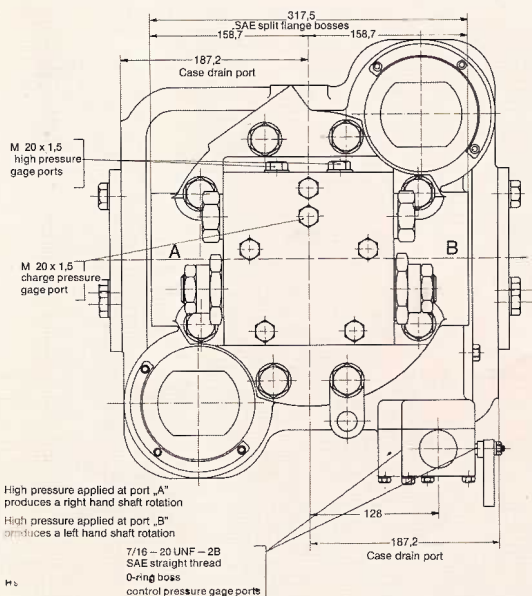
Installation dimensions series 27 units



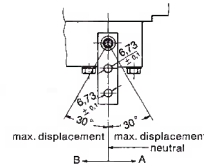
Variable displacement pump SPV 27



Fixed displacement motor SMF 27



Variable displacement motor SMV 27



Rotating control shaft in direction „A“
produces high pressure at port „A“ (right hand rotation)
produces high pressure at port „B“ (left hand rotation)
Rotating control shaft in direction „B“
produces high pressure at port „B“ (right hand rotation)
produces high pressure at port „A“ (left hand rotation)

H 1a

Max. displacement 333,7 cm³/rev. (SPV and SMV)

Fixed displacement 333,7 cm³/rev. (SMF)

High pressure relief valves set at 350 bar.

Different settings are possible

Drive shaft spline data: 16/32 pitch, SAE handbook 1963

Pressure angle 30°

Number of teeth 40

Side fit filled root

Bore diameter for shaft coupling
prior to splining

61,93 +0,074

Charge pressure relief valve (Charge pump housing)
set at appr. 14 bar at 1500 rpm

Charge pressure relief valve
(motor valve block) set at appr. 12 bar

Charge pump displacement 65,5 cm³/rev.*

Torque applied to control handle shaft
not to exceed 17,3 Nm

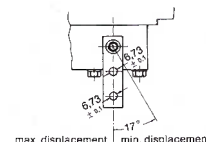
max. required torque
at control handle shaft 10 Nm

Control handle shaft spline data:
64/128 pitch, SAE handbook 1963

Knurled o. d. 10,13 -0,14

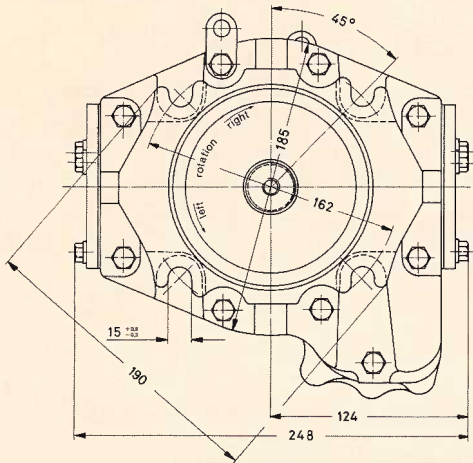
Number of teeth 24

* Other displacements see page 49

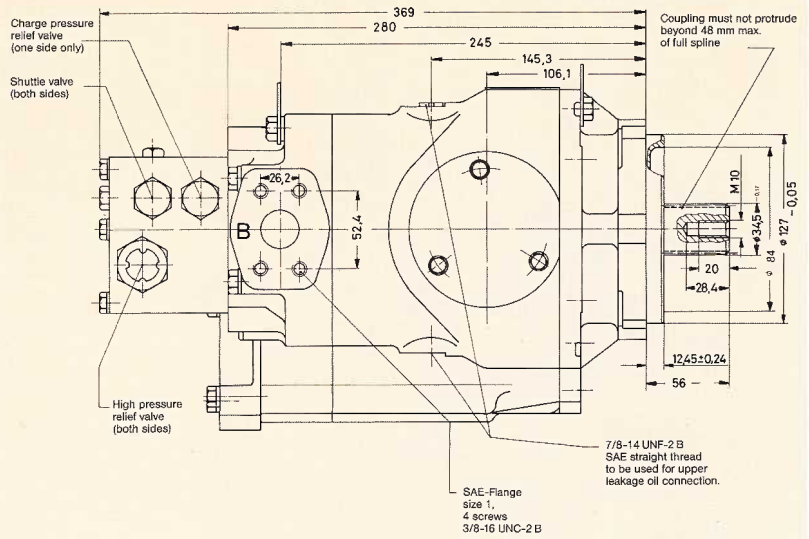


H 7a

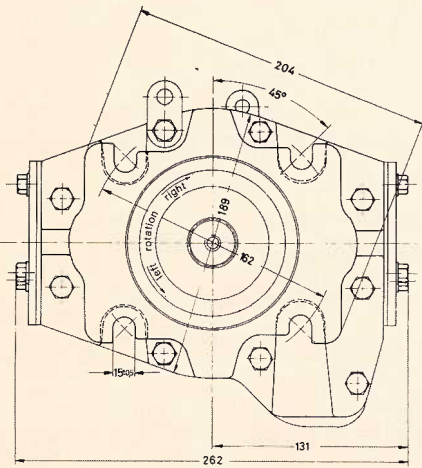
All dimensions subject to change



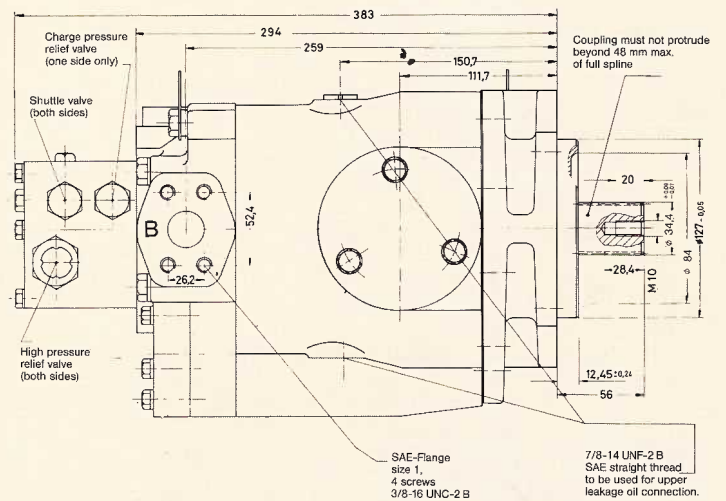
J 1



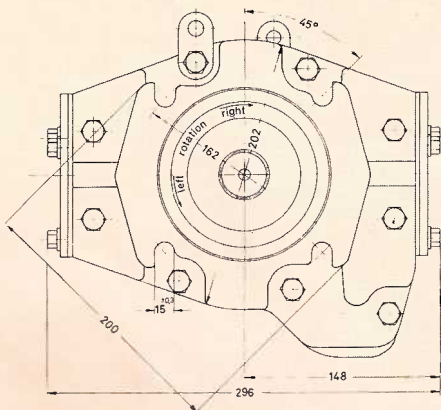
J 2



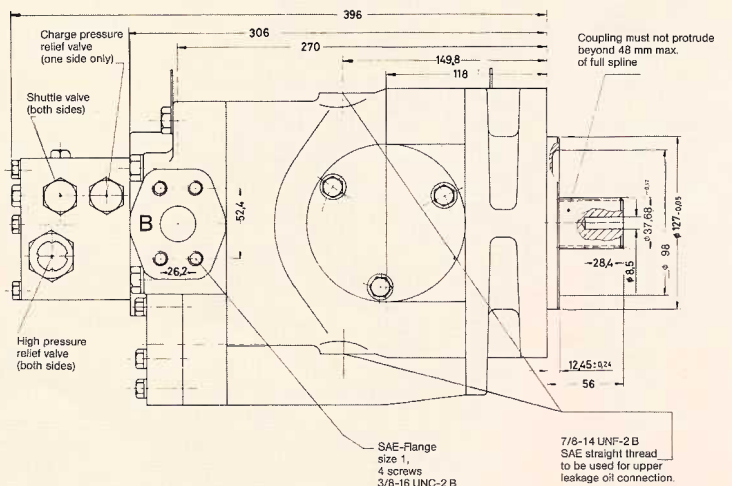
J 4



J 5



J 7



J 8