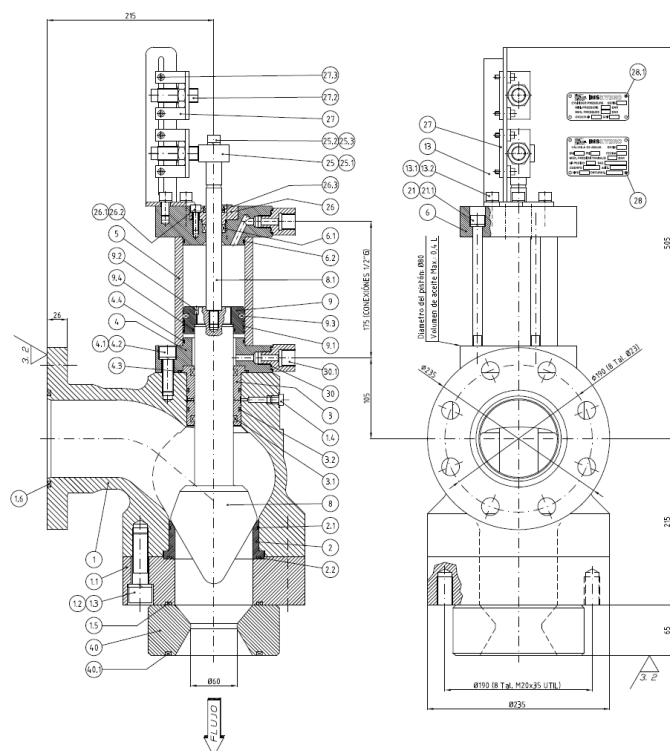


TECHNICAL DATA SHEET – NEEDLE VALVE (CAST IRON)

FEATURES
Casting body
Body needle closure (metal - metal)
Double seal on needle shaft
Opened/Closed Position Detector
Servomotor according to IMShydro Standard

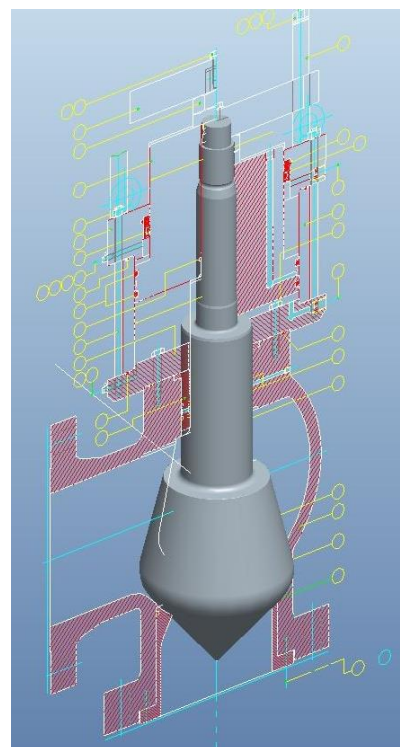
OPTIONS
Water inlet 90°, 60°/120°, 70°/110°
Mechanical lock
Position control 4 –20 mA
(x) Other measures and options on demand



COMPONENTS	
DENOMINATION	MATERIAL (x)
BODY	S355 JO / 1.0619 (GP240GH) / S355 J2 + N / A351-CF8M / G20 Mn5
SEAT	S355 J2 + N / AISI – 431 / A350 Gr LF2
NEEDLE	AISI – 431
SHAFT	AISI – 431
GUIDE BEARING	CuAl10Ni DIN1714 / 2.0975 / Bz (RG5)
PISTON	S355 J2 + N + Br / S355 J2 + Br
CAM STEM	AISI-416 + Ni PTFE / AISI 431 / AISI-431 + Ni PTFE
(x) Other materials on request	

AUXILIARY SYSTEMS
Opened/closed position limit switch
Manometer
Pressure switch
Local control panel

ACTUATION: OPENING UNDER LOAD OR BALANCED / CLOSING BY FLOW INTERRUPTION
Manual – Steering Wheel
Automated Actuation (Actuators) – Electric / Single-Acting Hydraulic / Double-Acting Hydraulic



VALVE CHECKING	
DENOMINATION	MATERIAL INSPECTION
BODY	CT / TT / VI / UT / PT
SEAT	CT / TT / VI / UT / PT
NEEDLE	CT / TT / VI / UT
SHAFT	CT / TT
GUIDE BEARING	CT / TT
PISTON	CT / TT / VI
CAM STEM	CT / TT / VI

UT: Ultrasonic Test / CT: Chemical Test / TT: Tensile Test / IT: Impact Test / PT: Penetrant Test / VI: Visual Inspection

All tests according to EN 10204-3.1 certification

TESTS			
FINAL TESTS	PRESSURE	DURATION	VALIDATION
BODY PRESSURE TEST	PN x 1,5 s/ EN 12-266	30 min	2 flat bottoms (blind flanges) US and DS, obturator opened, maintain stable pressure at PN x 1.5.
LEAK TEST	PN x 1,1 s/ EN 12-266	15 min	1 flat bottom US, obturator closed, maintain stable pressure at PN x 1.1.
CYLINDER PRESSURE TEST	PN x 1,5	30 min	Maintain stable pressure during 30 minutes with obturator opened / closed.
PERFORMANCE TEST	Pressure		Operate the valve 3 times with continuous movement and no stops. Verify stroke and opening/closing time.
DIMENSIONAL VERIFICATION	IMS Standard		According to drawing and inspection protocol.
PAINTING VERIFICATION	IMS Standard		Verify thickness and adherence (on request).

US: Upstream / DS: Downstream

COATING			
PRE-PREPARATION SURFACES ACCORDING TO ISO	PROCEDURE	COATS	COLOR
WATER CONTACT	POLYAMIDE PRIMER – POLYAMIDE FINISH FIBRE REINFORCEMENT	40 µm + 160 µm	BLACK RAL - 9005
AIR CONTACT	POLYAMIDE PRIMER – POLYURETHANE FINISH	30 µm + 70 µm	BLUE RAL – 5015
OIL CONTACT	POLYAMIDE PRIMER – POLYAMIDE FINISH	40 µm + 30 µm	WHITE
MACHINED SURFACES	TEMPORARY PROTECTION	20 µm	TECTYL-506

SIZE AND PRESSURE RANGE	
ND 50 – ND 500	NP 10 – NP 150
OTHER SIZES AND PRESSURES ON REQUEST	
DESIGN ADAPTED TO ANY ND AND NP VALUE	