



Worksheet HP02 & Training Record Hydraulic Equipment Specification

Equipment Specification

Email:

Course:

Provider:

Learning Objectives/Expected Outcomes: (90-160mins)

1. Appreciate the range of issues and requirements that need to be considered when purchasing, maintaining, or designing hydraulic equipment.
2. Understand the relationship between duty, design life, and equipment specifications by examining small, medium, and large power units.
3. To be able to produce an equipment specification for a scissor lift.

Previous Knowledge Required:

This module should be completed as part of the HW02 'Scissor Lift Design Project' or for purchasing staff, following the basic hydraulic introduction HI05.

Terminology:

Project management, specification, duty, working life, technical requirements.

Record of Achievement:



Click the in-app email icon to post your results, once training is complete. Enter an LRS username and endpoint details or see www.e4training.com/xapi/ for free examples. Keep a record of any written work or worked calculations etc.

Interactive tutorial



Complete the 'Hydraulic system priorities and specification' tutorial at www.e4training.com/hydraulic_courses/microtutor1.php?wtspecification

Complete quick quiz at end and post results.

Estimated time: 15 minutes, skill level 5

Date, score:

Tick when posted

Coursework investigations



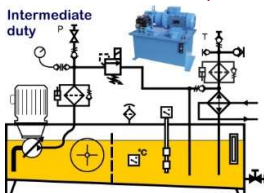
Study the different system priorities at www.e4training.com/hyd_princip/priority1.php

- Understand why all hydraulic systems are not the same.

Estimated time: 20 minutes, skill level 5

Date, complete:

Complete



Study the three different power unit options at www.e4training.com/hyd_maint/maintexample1.php

- Compare the components and performance of the different power units.



Estimated time: 30 minutes, skill level 5

Date, complete:

Complete

Description	Specification	Comments
Resident conditions	Customer req.	-40C min OTC max storage -30C min OTC max ambient working
Space claim	Customer req.	Note relevant drawing numbers where applicable.
Fluid	Industry std.	HP-40 Mineral Oil Viscosity @ 40, 100, 200C, 280C @ 40C, 80C @ 50C max working temperature.
Pipework + fitting	Factory std.	N3 pipework with ISO 8444 DIN 24' formed ends @ 92.5' or SA4.4 soft Range welded Flanges (above 62.5')
Hose + fittings	Industry std.	ISO 724 metric Ref fact 288, ISO 1179 SPPF Ref fact 288, ISO 8434 DIN 24' cone, cone shaped fittings Hose: 302-206 and 372-459.
Clearances	Industry std.	1674/171 (ISO 1406)
Sealing reqs	Industry std.	NI-16 NRS
Voltage	Industry std.	200VAC 15A 50Hz supply with 24 VDC sub-systems

Download and study the 'example system specification' from www.e4training.com/navigate6.php

- Study an example specification.

Estimated time: 20 minutes, skill level 5

Date, complete:

Complete

Practical and coursework assignments

Description	Specification	Comments
Resident conditions	Customer req.	-40C min OTC max storage -30C min OTC max ambient working
Space claim	Customer req.	Note relevant drawing numbers where applicable.
Fluid	Industry std.	HP-40 Mineral Oil Viscosity @ 40, 100, 200C, 280C @ 40C, 80C @ 50C max working temperature.
Pipework + fitting	Factory std.	N3 pipework with ISO 8444 DIN 24' formed ends @ 92.5' or SA4.4 soft Range welded Flanges (above 62.5')
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Voltage	Industry std.	200VAC 15A 50Hz supply with 24 VDC sub-systems

Identify a piece of hydraulic equipment you work with (or consider the scissor lift design example).

- Review the list of design priorities as per the example list.
- Write your own equipment specification based on the requirements at:

www.e4training.com/hyd_princip/priority3.php

Estimated time: 30 minutes, skill level 5

Date, complete:

Complete

Key questions / Plenary

Can you describe the main hydraulic system design priorities?

Can you identify the priorities that have been applied to a particular piece of equipment?

Can you write a specification to ensure equipment is delivered to meet these priorities?

Record answers:

Tick when complete

And Finally:

Complete this worksheet and keep for your certification records. Submit any written coursework etc. to your training course provider.

Follow-on Course Worksheets:

Potential follow-on worksheets include: HP03 – Hydraulic symbols

Or refer to your individual lesson plan or search the worksheet lists at

www.e4training.com/hydraulic_courses/worksheets1.php or [courses1.php](http://www.e4training.com/courses1.php)